

Curriculum Vitae

Dr. Dinesh Kumar R. ME, MBA, LL.B, Ph.D, P.Doc

Assistant Professor, Department of Mechanical Engineering,

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Dr. Dinesh Kumar R is serving as Assistant Professor in NIT Srinagar since March 2021, he is also assisting the IIEDC center as Institute Project Coordinator and Convener of Institutions Innovation Council (IIC). Before joining the Institute, he undertook Post-Doctoral Research Fellowship in the Department of Mechanical Engineering at the Indian Institute of Technology, Guwahati, from 2020-2021. He obtained his Ph.D. degree in 2019 from the National Institute of Technology Trichy. His thesis was an ISRO-sponsored project in Friction-Stir Welding of Aluminium Alloys for Aerospace Applications, a promising new area of research. He was also a Faculty Member in the Production Engineering Department of NIT, Trichy from 2014-2016 and Department of Mechanical Engineering NIT, Goa, from June 2019- July 2020. He has been granted with 1 patent , 13 publications to his credit in SCI/SCIE and SCOPUS indexed journals and contributed 10 book chapters in Metal Additive Manufacturing and Friction Stir Welding published by Springer. He has presented papers at various International Conferences. He has delivered around 30 Guest Lectures across India in research, management and innovations.

He is an all-rounder with extraordinary leadership and teaming skills with multiple achievements in curricular, sports, co-curricular and extra-curricular activities. His areas of research include underwater welding, FSW, Additive Manufacturing, and innovations in Agriculture. He is holding 3 research projects funded by AICTE and MSME and also funded with a High-End workshop through SERB. He has filed one patent and has 20 publications in SCI and SCOPUS-indexed journals and has also contributed 10 book chapters in Metal Additive Manufacturing, Laser cladding, and welding. He was also a keynote speaker at various National & International Conferences and delivered around 40 guest lectures at different colleges across the Globe. To learn about administration in academics he pursued his MBA from Bharathiyar University and LL.B from Annamalai University through distance Education. He was also awarded as the youngest TBI holder by Dr Jithedar Singh, Minister of Science and Technology at New Delhi. Also won the best IIC holder award for North West Zone from AICTE Vice Chairman Prof. M.P. Poonia in IIC Regional meet Jaipur. He was the Founder-President of the Research Scholars Forum at NIT Trichy leading more than 1500 research scholars and organizing around 20 events including workshops, Guest lectures, and a Research Colloquium as Chairman. He was a member of the NBA Accreditation team which was successful in getting the Washington Accord Accreditation in the Production and Metallurgy departments of NIT Trichy and Mechanical Department in NIT Srinagar. He is a passionate innovator guiding student projects and two of his students' teams won national-level awards that include the smart India Hackathon. He is also the coordinator for ARIIA, NISP, Yukti, and Kapila schemes of AICTE. He is also an external Ph.D. examiner of VTU, Osmania University, and a panel member of Anna University. He has won State level competitions in Fencing, Judo, Swimming, Football and Athletics

TEACHING EXPERIENCE

From	To	No of Years/ Months	Name of the Organization	Position Held
March 2021	Till Date	2 Year	National Institute of Technology Srinagar	Assistant Professor Department of Mechanical Engineering
June 2019	July 2020	1 year 1 month	National Institute of Technology Goa	Faculty on Contract in Department of Mechanical Engineering
August 2014	October 2015	1 year 2 months	National Institute of Technology Trichy	Temporary Faculty in Department of Production Engineering

Total Work Experience: 3 Years 5 Months (10 Semesters)

RESEARCH EXPERIENCE

From	To	No of Years / Months	Funding organization	Position Held
September 2020	March 2021	7 months	IIT Guwahati/ MHRD/GoI	Post Doctoral Research Fellow, IIT Guwahati
March 2019	May 2019	3 Months	Royal Academy, London, United Kingdom	Research Associate in INDO UK Project
November 2017	November 2018	1 Year	Indian Space Research organization	Senior Research Fellow in ISRO RESPOND Project
November 2015	November 2017	2 Years	Indian Space Research organization	Junior Research Fellow in ISRO RESPOND Project

Total Research Experience: 3 Years 10 Months

ACADEMIC RECORDS (Full Time- Regular)

Course	Institution	Board / University	Year of Completion
Ph.D. (Manufacturing)	National Institute of Technology – Tiruchirappalli	NIT Trichy	2019
M.E (Production)	PSG College of Technology, Coimbatore.	Anna University	2014
B.E. (Mechanical)	Saranathan College of Engineering, Tiruchirappalli	Anna University	2012
XII	Mount Zion Matriculation Higher Secondary School, Pudukkottai	State Board	2008
X	St. Mary's Boys High School, Pudukkottai	State Board	2006

ACADEMIC RECORDS (Distance Education)

Course	Institution	Board / University	Year of Completion
LL.B	Annamalai University	Annamalai University	2018
MBA	Bharathiyar University	Bharathiyar University	2014

SPONSORED PROJECTS AND FUNDED PROGRAMS

1. Additional Implementing officer in Technology Business Incubation Hub of NIT Srinagar on Agri Tech sponsored by DST (Rs. 5 Crore) (Approved)
2. Co Principal Investigator in Impact study on Prime Minister scholarship in UT of Jammu, Kashmir & Ladak sponsored by AICTE (20 Lakhs) (2022-23) (On Going)
3. Nodal Officer for Awareness Program for MSME in Jammu & Kashmir, sponsored by Ministry of MSME (13.5 Lakhs) (2022-23) (On Going)
4. Principal Investigator in Design and Fabrication of Floating Cycle for Dal Lake sponsored by Ministry of MSME under Design Champion Scheme (Rs.15 Lakhs) (2022-23) (On Going)
5. Principal Investigator in Design and Fabrication of Hoverboard sponsored by Ministry of MSME under Design Expertise Scheme (Rs.1.5 Lakhs) (2021-22) (Completed)
6. Program Coordinator HIGH END Workshop on 5 Axis CNC Machine under Accelerate Vigyan Scheme sponsored by SERB (1.5 Lakhs) (2021-22) (Completed)

PATENT GRANTED

1. Muthukumar S, **Dinesh Kumar R** – Forced Cooling Friction Stir Welding
Appl.no.: **202141059942**

PUBLICATIONS

Journals Published

1. **Dinesh Kumar Rajendran**, Ganesa Balamurugan.K, S.Muthukumar- “Investigation on the mechanical and wear properties of Al/Mg bimetallic composite fabricated by friction stir processing technique” - Transactions of the Indian Institute of Metals (2018) 71(5):1247–1255 (**SCI**). ISSN: 0972-2815
2. **Dinesh Kumar R**, S.Muthukumar, Vincent Xavier, T.Venkateswaran, D.Sivakumar- “Investigation of weld parameters on ductility, fracture behavior and metal flow of friction stir welded AA2219-T87 alloy”- Journal of Central South University (2019) 26: 2318–2327 (**SCIE**). ISSN: 2095-2899
3. **Dinesh Kumar R**, Ilhar Ul Hasan, S.Muthukumar, T.Venkateswaran, D.Sivakumar- “Single and Multi-response Optimization and validation of mechanical properties in dissimilar friction stir welded AA2219-T87 and AA7075-T73 alloys using T-GRA”- Experimental Techniques (2019) **43**, 245–259 (**SCIE**). ISSN:0732-8818
4. **Dinesh Kumar R**, S.Muthukumar, T.Venkateswaran, D.Sivakumar- “Failure analysis and process parameter influence on Mechanical and Metallurgical behaviour of Friction Stir Welded AA2219-T87 Butt Joints” – Surface Review and Letters (2019) 6(26): 1142-1154 (**SCIE**) <https://doi.org/10.1142/S0218625X19501075>. ISSN: 0218-625X

5. R. Nandhini, **R. Dinesh Kumar**, S. Muthukumaran, S. Kumaran- “Analysis of Mechanical and Crystalline Characteristics of Polyamide 66 Joints Welded by Novel Friction Stir Welding” -Arabian journal for science and engineering (2019) **44**(9), 7399–7405 (**SCIE**). ISSN 1319-8025
6. Dharun Kasilingam, SP Sathiya Prabhakaran, **Dinesh Kumar Rajendran**, Varthini Rajagopal, T Santhosh Kumar, “Exploring the Growth of COVID-19 Cases using Exponential Modelling Across 42 Countries and Predicting Signs of Initial Containment using Machine learning” *Transboundary and Emerging Disease (SCI)*
7. **Dinesh Kumar Rajendran**, Varthini Rajagopal, Alagumanian, S. et al. Systematic literature review on novel corona virus SARS-CoV-2: a threat to human era. *VirusDis.* 31, 161–173 (2020).
8. **Dinesh Kumar R**, Elangovan S, Siva Shanmugam N. Parametric optimisation of pulsed-TIG welding process in butt joining of 304L austenitic stainless steel sheets. *International Journal of Research in Engineering and Technology.* 2014;6:213-9.
9. Nandhini, R., **Dinesh Kumar R**, Muthukumaran, S., & Kumaran, S. (2019). Optimization of Welding Process Parameters in Novel Friction Stir Welding of Polyamide 66 Joints. In *Materials Science Forum* (Vol. 969, pp. 828–833). Trans Tech Publications, Ltd.
10. S. Sobana, S. Alagumanian, **R. Dinesh Kumar**, P. Sakthivel, P. Sivakumar (2020), Effect Of Al₃ + Inclusion on Characterization Exploration, Magnetic and Anti-Cancer Properties of Cobalt Ferrite Nanoparticles Synthesised by Co-Precipitation Process. *International Journal of Engineering and Advanced Technology (IJEAT)* ISSN: 2249 – 8958, Volume-9 Issue-3
11. Jeyaprakash N, Yang C-H, Karuppasamy SS, **Dinesh Kumar R**. Correlation of microstructural with corrosion behaviour of Ti-6Al-4V specimens developed through selective laser melting technique. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering.* 2022;236(5):2240-2251. doi:10.1177/09544089221087823
12. **Dinesh Kumar, R.**, Srija, D., Suresh, P., & Muthukumaran, S. (2019). Optimization of Process Parameters for Improved Corrosion Resistance and Microstructural Exploration in Friction Stir Welding of AA2024 - AA6061. In *Materials Science Forum* (Vol. 969, pp. 589–594). Trans Tech Publications, Ltd. <https://doi.org/10.4028/www.scientific.net/msf.969.589>
13. A. Karpagaraj, J. Anthuvan Stephen Edberk, T. Deepan Bharathi Kannan, **Dinesh Kumar Rajendran**, and T. Ramesh (2022) Effect of GTAW process parameters on joining stainless steel 316L. *AIP Conference Proceedings* 2460, 070010 (2022); <https://doi.org/10.1063/5.0095789>

Journals under Review

14. **Dinesh Kumar R**, D.Manisankar, S.Muthukumaran, Vincent Xavier, T.Venkateswaran, D.Sivakumar- Effect of copper precipitate dispersion in the weld zone of dissimilar friction stir welded AA2014 - AA2219- *Journal of Magnesium & Alloys.*
15. Mohammad Muhiuddin , **Dinesh Kumar R**, S.Muthukumaran-“ Microstructural Evaluation and Deposition Improvement on Welding of Structural Steel (IS2062) using

Hyperfill MIG and Tandem MIG Process for Heavy Fabrication Applications” – Journal of Advance Manufacturing Technology

16. **Dinesh Kumar R**, Gnana Tejaswi, S.Muthukumaran, Vincent Xavier, T.Venkateswaran, D.Sivakumar Effect of Copper Backing and parametric optimization using T-GRA on AA2219-T87 and AA6061-T6 Journal of Mechanical Engineering Science.

Book Chapter

1. Ganesa Balamurugan Kannan and **Dinesh Kumar Rajendran**, “A Review on Status of Research in Metal Additive Manufacturing” Advances in 3D Printing & Additive Manufacturing Technologie Wimpenny, D.I., Pandey, P.M., Kumar, L.J., Eds. Springer: Singapore, 2017; pp. 95–100 (**Springer Book Chapter**)
2. **Dinesh Kumar R**, Varthini R, S.Muthukumaran – “Pareto optimization and metallurgical characterizations of dissimilar friction stir welded AA6061-AA7075 alloys”- 2020 (**Springer Book Chapter**)
3. **Dinesh Kumar R**, Pradeep S, S.Muthukumaran- Multi-response optimization and mechanical behaviour of Al-Si /Al-Cu alloys dissimilar friction stir welding -2020 (**Springer Book Chapter**)
4. Varthini Rajagopal, **Dinesh Kumar Rajendran**, B Santhi, Arjun R Jagadish- Selective Laser Melting Based Additive Manufacturing: Materials, Properties and Defect Analysis 2021/11/29 (**Bentham Science Publishers**)
5. YG Bala, **Dinesh Kumar Rajendran**, Varthini Rajagopal - A Review on Binder Jetting Fabrication: Materials, Characterizations and Challenges -2021/11/29 (**Bentham Science Publishers**)
6. **R Dinesh Kumar**, Baskaran Balaji, Kannan Ganesa Balamurugan - Microstructural Characterization and Microhardness Investigations on Friction Stir Additive Manufactured Commercially Pure Aluminium Alloy- 2022 (**Springer, Singapore**)
7. Aniruddha Ghosh, **Dinesh Kumar Rajendran**, Varthini Rajagopal - Inhibiting COVID-19 Transmission in India Through Design of Automated Contactless Face Mask Vending Cum Disposal Machine with Self-Sterilization Unit – 2022 (**Springer, Singapore**)
8. Sumanth Ratna Kandavalli, Anthuvan Stephen Edberk, **Dinesh Kumar R** - A Progressive Review on Wire Arc Additive Manufacturing: Mechanical Properties, Metallurgical and Defect Analysis 2021/11/29 (**Bentham Science Publishers**)
9. **R Dinesh Kumar**, S Pradeep, S Muthukumaran - Multi-response Optimization and Mechanical Behaviour of Al–Cu/Al–Mg–Si Alloys by Dissimilar Friction Stir Welding 2021 (**Springer, Singapore**)
10. **R Dinesh Kumar**, R Varthini, S Muthukumaran - Pareto Optimization and Metallurgical Characterizations of Dissimilar Friction Stir Welded AA6061–AA7075 Alloys 2021(**Springer, Singapore**)

INTERNATIONAL CONFERENCE ATTENDED:

1. **Dinesh Kumar R**, S.Muthukumaran, T.Venkateswaran, Vincent Xavier, D.Sivakumar “Effect of tool shoulder profile on mechanical and metallurgical properties of dissimilar friction stir welded AA6061-AA7075” – ICAMPS –IIM Trivandrum

2. **Dinesh Kumar R**, Ganesa Balamurugan K, S.Muthukumaran- “ A Study on the Effect of Process Parameters on Mechanical Property of Friction Stir Additive Manufactured Al 1000 plates” – International Conference on Contemporary Design and Analysis of Manufacturing and Industrial Engineering Systems-NIT Trichy
3. Nandhini R, **Dinesh Kumar R**, S.Muthukumaran, S.Kumaran- “Tribological Behaviour of Friction Stir Processed Glass Fiber Reinforced (GFR) Polyamide 66 Composite”- International Conference on Contemporary Design and Analysis of Manufacturing and Industrial Engineering Systems-NIT Trichy
4. **Dinesh Kumar R**, S.Muthukumaran, T.Venkateswaran, D.Sivakumar- “Multi-Response Optimization of Friction Stir Welded AA2219-T87 by Taguchi -Grey Relation Analysis and Metallurgical Inferences”-International Conference RIPE -17 at Madras Institute of Technology- Chennai.

CONFERENCE ORGANISED

1. Chairman - First Research Colloquium on Emerging Trends in Engineering, Science, Management and Technology (23-25 March, 2018) - NIT Trichy.
2. Organizing Secretary – National Conference on Industry Fest and Innovation Hunt (01-03 March, 2023) at NIT Srinagar in collaboration with Indian Army

GUEST LECTURES DELIVERED

S.No	Title	Program and College	Date and Participant
1	Design Thinking for Engineering Design	FDP organized by Dept. of Mechanical Engineering, Alliance University , Banglore	23 rd February 2023, 200 Faculty
2	Process of Innovation Development and Technology Transfer	Guest Lecture organized by IIC and Dept of Chemistry, VIT University, Chennai Campus	17 th February 2023, 200 pariciapnts
3	Design Thinking for Strategy, Innovation and Entrepreneurship	Webinar organized by Institutions Innovation Council, Sri Eshwar College of Engineering, Coimbatore	04 th February 2023, 150 participants
4	Advanced Welding Techniques	Guest Lecture Organised by Dept. of Mechanical Engineering, Periyar Maniammai University, Tanjavur	03 rd February 2023, 60 participants
5	Design Thinking for Career Design	One Day Interactive Seminar on Design Thinking organised by Bishop Heber College, Trichy	19 th January 2023, 600 participants
6	Advancement in Mechanical and Automobile Technologies	One Day Workshop on Recent Technologies in Welding organized by Easwari Engineering College, Chennai	11 th January 2023, 100 Participants

7	3D Printing Technologies	One Day International Seminar on Innovation Technologies and Cyber Security organised by Holy Cross College, Trichy	5 th January 2023, 200 Participants
8	Stress Strain Curve	Online 6 day FDTP on Strength of Materials organized by Government Engineering College, Srirangam	12 th to 17 nd December 2022, 60 Faculty
9	Recent Trends in Mechanical Engineering	2 nd National Conference on Recent Innovation in Mechanical Engineering organised by Jai Shriram Engineering College	18 th November 2022, 400 participants
10	Opportunities & Higher Education in Mechanical Engineering	Online Webinar for Career Guidance organised by Annamachariya Institute of Technology and Sciences, Rajampet	10 th September 2022, 100 participants
11	Effect of Friction Stir Welding in Joining of Aluminium Magnesium Dissimilar Alloys for Engineering Applications	One Week FDP on Advanced Research in Friction Stir Welding and its Engineering Applications	22 nd to 26 th August 2022, 70 faculty
12	Design Thinking : A launching Pad for Startup	Impact Lecture series organised by SSM College of Engineering in association with IIEDC Srinagar	25 th June 2022, 100 participants
13	Insight and GrabCAD basics, startup opportunity in Bio Medical Devices	One Week Online STTP on Bio Medical Devices : Devices and Manufacturing organized by NIT Srinagar	20 th to 24 th June 2022, 60 participants
14	NAAC- Student Support and Progression	Two days National Level Seminar on Revised Assessment and Accreditation Framework of NAAC : understanding and opportunities in HEI's organized by Kongunadu College of Engineering and Technology, Namakkal	6 th to 7 th May, 2022 , 50 faculties
15	3D Printing of Human Organs and Drugs	One Week Workshop on Innovative Technologies in Chemistry	25 th to 30 th April 2022, 100 faculties
16	The journey from nowhere to somewhere	Career Guidance session organised by Sankara Matriculation School, Trichy	23 rd March 2022, 300 school students
17	Research possibilities and basics of CNC simulation	Two Weeks High End Workshop on 5 axis CNC Machine organized by NIT Srinagar	7 th to 14 th March 2022, 50 students

18	Innovation Techniques of 3D Printing	One day Online Workshop on Innovation Organized by Annapoorana Engineering College	16 th February 2022, 300 students
19	Macaulay and Area Moment Method	Online 6 day FDTP on Strength of Materials organized by Government Engineering College, Srirangam	17 th to 22 nd January 2022, 60 Faculty
20	Design Thinking and Practices	One day Impact Workshop on Entrepreneurship, Research & Innovation, IIEDC Srinagar	29 October 2021, 100 students
21	Friction Stir Welding of Light Metals/Alloys for Aerospace applications	Two Week Virtual FDP on Advanced Materials and Manufacturing Technologies organized by Easwari Engineering College Chennai	September 29, 2021 , 100 faculty
22	Friction Stir Welding of Light Metals/Alloys for Aerospace applications	A Five Day Online Faculty Development Program on Applications of Artificial Intelligence in Modern Manufacturing organized by Karunya University , Coimbatore	August 3-7, 2021, 60 faculty
23	Advanced Welding Process for Industry 4.0	A three day FDP on Industry 4.0 : Advanced Manufacturing organized by KSRM College of Engineering, Andra Pradesh	June 18-21, 2021, 100 faculty
24	AutoCAD Hands on Training	One Day Workshop on Design and Manufacturing by CESCO NIT Goa	November 2019
25	How to Present a Paper/Poster in a Conference	CESCO inauguration at NIT Goa	September 2019
26	Research Tools (Mendeley, Turnitin and Grammarly)	Research Colloquium Organized by RSFNITT, NIT Trichy	June 2018, 100 Research Scholars
27	Friction Stir Welding	METTLE-18, Annual Technical Symposium in NIT Trichy.	March 2018, 400 students
28	Basic Computer Training	Upskilling Program for Middle School Teacher at Thiruverumbur block	December 2017, 60 teachers

GUEST LECTURES AND WORKSHOPS ORGANISED

1. Coordinator of One week awareness program on sensitizing MSMEs in Jammu and Kashmir 28th February to 6th March, 2023 funded by Ministry of MSME (3.5 Lakhs)
2. Coordinator of One Week Online STTP on Bio Medical Devices : Devices and Manufacturing by ATAL, AICTE from 10rd to 15th June 2022. (1 Lakhs)

3. Coordinator of Online High End Workshop on 5 Axis CNC Machine sponsored by SERB, Accelerate Vigyan scheme from 7th to 14th March 2022 (1.5 Lakhs)
4. Coordinator of Online FDP on Additive Manufacturing from 3D printing to Factory Floor sponsored by ATAL, AICTE from 23rd to 27th August 2021. (1 Lakhs)
5. Mastering the Art of Scientific Publication
6. The Usefulness of Useless Knowledge delivered
7. Ethics in Research and Profession delivered by Professor James Conrad from the University of North Carolina, USA
8. Guest Lecture on Nature talk on Snakes
9. Guest Lecture on Veganism and Animal Rights
10. Workshop on E-learning technology for Effective Research
11. Workshop on Web of Sciences and Endnote
12. Workshop on Grammarly Writing Support Software and Citation Audit Tool
13. Workshop on Authoring Quality Technical Paper and Effective use of IEEE Digital Library
14. Workshop on Latex
15. Workshop on Systematic approach for Literature Survey

COMPUTER PROFICIENCY

Software known: Auto CADD, Pro-E, Arena, ANSYS, Minitab, Grab CAD, 3D Slicer

ADMINISTRATIVE EXPERIENCE

- Convenor - Institution Innovation Council NIT Srinagar (June 2021 – till date)
- Coordinator – MSME Design & IPR Scheme, NIT Srinagar (June 2022 – till date)
- Coordinator – ARIIA, NISP, Kapila, Yukthi (AICTE) NIT Srinagar (June 2022 – till date)
- Department Web Page Coordinator, Mechanical Engineering NIT Srinagar (January 2022-till date)
- PhD Coordinator for Mechanical Engineering NIT Srinagar (January 2022- December 2022)
- Department NBA Criterion 2 and 3 incharge (June 2021 to till date)
- Department NIRF Research and perception Incharge (2021-2023)
- Project Coordinator - IIEDC NIT Srinagar (June 2021 – till date)
- Faculty Coordinator Mechanical Engineering Technical Association - NIT Goa
- Department Website In charge - NIT Goa (2019-2020)
- Member of Mechanical Engineering Syllabus Framing Committee- NIT Goa (2019-2020)
- Ph.D./MS Secretary, Students Council NIT Trichy (2017-2018)
- Founder & President of Research Scholar Forum, NIT Trichy (2015-2018) (rsf.nitt.edu)
- Student organizer of Smart India Hackathon 2018
- Team lead in HumaNITTy. (Social Service Initiative) (2015-2019)
- Member of organizing committee in IMME17 conference.
- Organizer in INCAPIE conference 2015.
- Member in NBA accreditation documentation committee for Department of Production

Engineering, NIT Trichy

I hereby declare that all above-mentioned information is in accordance with fact or truth up to my knowledge and I bear the responsibilities for the correctness of the above-mentioned particulars.

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Dr. Dinesh Kumar R
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