

FACULTY PROFILE

ARUL MARCEL MOSHI. A

Personal Details

Salutation: Mr.

Instructor Name: **Arul Marcel Moshi. A**

Designation: **Assistant Professor (Senior Grade)**

Department: MECHANICAL ENGINEERING - NEC

Date of Joining in NEC: 15-05-2015

Date of Joining in Present Post: 15-05-2015

Mobile Number: 9043842033

College Id: MECT521

College Email Id: moshimarshal@nec.edu.in

Unique Staff Id: 13187774177



Address for Communication

Address Line 1: 3/35 **Pincode:** 627104

Address Line 2: North Street, Vijayapathi. **District:** Thirunelveli

City: Thirunelveli **State:** Tamilnadu

Educational Qualifications

| Sr | Name of the Degree | Specialization | Name of the Institute | Name of the University | Year of Passing |
|----|--------------------|--------------------------|---|-------------------------|-----------------|
| 1 | B.E | Mechanical Engineering | Francis Xavier Engineering College, Tirunelveli | Anna University Chennai | 2013 |
| 2 | M.E | Engineering Design | Government College of Engineering, Tirunelveli. | Anna University Chennai | 2015 |
| 3 | Ph.D | Natural fiber composites | National Engineering College, Kovilpatti | Anna University Chennai | Pursuing |

Faculty Professional Experience

| Sr | Name of Institute / Organizations | Designation | Date of Joining | To | Total Experience |
|----|---|---------------------|-----------------|------------|------------------|
| 1 | National Engineering College, Kovilpatti. | Assistant Professor | 15-05-2015 | 31-07-2021 | 6 Years 2 Months |

| Sr | Name of Institute / Organizations | Designation | Date of Joining | To | Total Experience |
|----|---|------------------------------------|-----------------|------------|------------------|
| 2 | National Engineering College, Kovilpatti. | Assistant Professor (Senior Grade) | 02-08-2021 | 10-05-2022 | 9 Months |

FDP/ Workshop/ Seminar/ Training/ Knowhow Program Attended

| Sr | Name of the Event | Event Type | Name of the Institution or Organization | From | To |
|----|---|-----------------------------|---|------------|------------|
| 1 | Advances in Materials, Manufacturing and Propulsion – (AMMP-2018) | National Workshop | University College of Engineering, Nagercoil | 19-03-2018 | 20-03-2018 |
| 2 | Applied Soft Computing: Theory and Practice | Faculty Development Program | PSG College of Technology, Coimbatore. | 22-04-2019 | 28-04-2019 |
| 3 | Personality Development | National Workshop | Vivekanandha College of Arts & Sciences for Women (Autonomous), Thiruchengode | 17-04-2020 | 18-04-2020 |
| 4 | Design of Experiments – An Engineering Perspective | National Workshop | Journal of Advanced Engineering Research in association with hexacube, India | 25-04-2020 | 27-04-2020 |
| 5 | Fuzzy logic and Neural network approaches for Engineering solutions | National Workshop | Journal of Advanced Engineering Research in association with hexacube, India | 29-04-2020 | 30-04-2020 |
| 6 | Special webinar series on research paper writing | National Seminar | Rohini College of Engineering and Technology | 04-05-2020 | 06-05-2020 |
| 7 | Finite Element Analysis Practice and MATLAB | Faculty Development Program | TONTADARYA College of Engineering, Gadag, Karnataka. | 13-07-2020 | 17-07-2020 |

International and National Conferences Attended

| Sr | Name of the Conference | Event Type | Name of the Institution or Organization | Title of the Paper | Authors |
|----|---|----------------------------------|---|---|---|
| 1 | Advances in Mechanical Engineering'14 | National Conference Presentation | Mepco Schlenk Engineering College, Sivakasi. | Relative valve timing analysis in a multi cylinder engine | Arul Marcel Moshi.A |
| 2 | Emerging Trends in Engineering Design, EDQUEST'15 | National Conference Presentation | Government College of Engineering, Tirunelveli. | Effect of warping Deformation mode in the prediction of free edge stresses in the composite laminates | Ramaswamy.S, Arul Marcel Moshi.A and Selwin Rajadurai.J |

| Sr | Name of the Conference | Event Type | Name of the Institution or Organization | Title of the Paper | Authors |
|----|--|---------------------------------------|--|--|--|
| 3 | Prediction of warping Deformation in composite laminates and its validation through experimental means | International Conference Presentation | Cape Institute of Technology, Leveingipuram. | Prediction of warping Deformation in composite laminates and its validation through experimental means | Arul Marcel Moshi.A |
| 4 | Modeling, Simulation and control | International Conference Presentation | Karpagam College of Engineering, Coimbatore | Factors influencing submerged arc welding on stainless steel - a review | Arul Marcel Moshi.A, S.R.Sundara Bharathi, Rajeshkumar.R and Kumar.R |
| 5 | Productivity, Efficiency & Competitiveness in Design and Manufacturing | International Conference Presentation | PSG College of Technology, Coimbatore | Study On Post Weld Heat Treatment On Mechanical Properties And Microstructural Characteristics Of Gas Tungsten Arc Welded AA 6063 And AA 707 | S.R.Sundara Bharathi, Rajeshkumar.R and Arul Marcel Moshi.A. |
| 6 | Recent Innovations in Production Engineering, RIPE 2017 | International Conference Presentation | Anna University MIT Campus, Chennai. | Effect of post weld heat treatment on mechanical properties and microstructural characteristics of Gas Tungsten Arc Welded Dissimilar joints | S.R.Sundara Bharathi, Rajeshkumar.R and Arul Marcel Moshi.A. |
| 7 | Advanced Engineering and Technology for sustainable Development | International Conference Presentation | Karpagam College of Engineering, Coimbatore | Hybrid Optimization of Turning Parameters using COPRAS-TAGUCHI technique | M.Rajesh, A.Arul Marcel Moshi, Joseph Mathew and K.Gowthaman |
| 8 | Recent Advances in Mechanical Engineering | National Conference Presentation | National Engineering College, Kovilpatti. | Analysis on Mechanical performance of Bamboo and Glass Fiber Reinforced Epoxy Hybrid Composite Structure | Vijaya Kumar.K, Selwin Rajadurai.J and Arul Marcel Moshi.A. |
| 9 | Intelligent Systems and Control (ISCO) | International Conference Presentation | Karpagam College of Engineering, Coimbatore | Multi objective optimization of MIG welding process parameters on mechanical properties of AA6061-T6 using Taguchi-GRA Entropy method | Shahul Hameed.K, Arul Marcel Moshi.A and Rajesh.M |
| 10 | Advanced Materials & Processing | International Conference Presentation | Kalasalingam University, Srivilliputhur. | Tensile, Flexural and Impact strength analysis on Bamboo-GFRP Hybrid Composite structure under different lamina orders | Vijaya Kumar.K, Selwin Rajadurai.J and Arul Marcel Moshi.A. |

| Sr | Name of the Conference | Event Type | Name of the Institution or Organization | Title of the Paper | Authors |
|----|---|---------------------------------------|---|---|--|
| 11 | Joining of Materials (SOJOM 2018) | International Conference Presentation | SOJOM | Multi Objective Optimization of Mig Welding Process Parameters on Mechanical Properties of AA6061-T6 Using Taguchi-GRA Entropy Method | Shahul Hameed.K and Arul Marcel Moshi.A |
| 12 | Engineering Materials, Metallurgy and Manufacturing (ICEMMM - 2018) | International Conference Presentation | SSN College of Engineering, Chennai | Effect of hybrid natural fiber reinforcement on mechanical behaviour of polyester based composites | Ramprakash.P, Sundara Bharathi.S.R., Arul Marcel Moshi.A and Harihara Sakthisudhan.P |
| 13 | Recent Innovation in Mechanical Engineering (ICRIME'19) | International Conference Presentation | Francis Xavier Engineering College, Tirunelveli | A Novel Analysis on Bamboo - GFRP Hybrid Composite Structures for Mechanical Strength under Different Lamina Orders | Vijaya Kumar.K, Selwin Rajadurai.J, Arul Marcel Moshi.A and Aswanth Krishnan.M |
| 14 | Materials, Manufacturing and Machining (ICMMM'19) | International Conference Presentation | Bannari Amman Institute of Technology, Sathyamangalam | Investigation on the Mechanical Properties of Sisal – Banana Hybridized Natural Fiber Composites with Distinct Weight Fractions | Arul Marcel Moshi.A, Madasamy.S, Sundara Bharathi.S.R., Periyannayaganathan.P and Aravind Prabakaran |
| 15 | Innovations and Recent Trends in Mechanical Engineering | National Conference Presentation | University VOC College of Engineering, Thoothukkudi. | Study on impact of free edge stress on synthetic angle ply composites | Arul Marcel Moshi.A and Vijayakumar.K |
| 16 | Materials Engineering & Characterization (ICMECh'19) | International Conference Presentation | Adhi College Of Engineering and Technology, Chennai | Characterization of new natural cellulosic fibers - A Comprehensive Review | Arul Marcel Moshi.A, Ravindran.D, Sundara Bharathi.S.R, Suganthan.V and Kennady Shaju Singh.G |
| 17 | Numerical Optimization in Engineering & Sciences. (NOIEAS-2019) | International Conference Presentation | National Institute of Technology, Warangal | Multi Objective Optimization of TIG welding process parameters on Alloy 61s using Taguchi based Grey Relational Analysis | Arul Marcel Moshi.A, Ravindran.D, Sundara Bharathi.S.R, Michael Thomas Rex and Ramesh Kumar.P |
| 18 | Materials and Manufacturing Methods (MMM 2019) | International Conference Presentation | National Institute of Technology, Trichy | Multi Objective Optimization of CNC Turning Process Parameters with Acrylonitrile Butadiene Styrene Material | S.R.Sundara Bharathi, D.Ravindran, A.Arul Marcel Moshi, R.Rajeshkumar and R.Palanikumar |

| Sr | Name of the Conference | Event Type | Name of the Institution or Organization | Title of the Paper | Authors |
|----|--|---------------------------------------|---|--|--|
| 19 | Recent Trends in Metallurgy, Materials Science and Manufacturing | International Conference Presentation | National Institute of Technology, Trichy | Experimental Investigation on the Performance Enhancement of Single Basin Double Slope Solar Still using Kanchey Marbles as Sensible Heat St | Muthu Saravanan N, Rajakumar S and Arul Marcel Moshi A |
| 20 | Advances in Materials Research 2019 | International Conference Presentation | Bannari Amman Institute of Technology, Sathyamangalam | Effectiveness study on Liquid Penetrant Testing on A516 Low Carbon Steel under the influence of Temperature and Vibration | Manikandan K.R.; Ashwin Sivagurunathan P; Ananthan S.S.; Arul Marcel Moshi A and Sundara Bharathi S.R. |
| 21 | Advances in Materials Research 2019 | International Conference Presentation | Bannari Amman Institute of Technology, Sathyamangalam | Effectiveness Measurement Study on Entrepreneurship Awareness Camp for Technical Education Students using Kirkpatrick's Model | T.Sakthi and A.Arul Marcel Moshi |
| 22 | Sixth Biennial Conference of the Indian Academy of Management (INDAM 2020) | International Conference Presentation | Indian Institute of Management Tiruchirappalli | Effectiveness Measurement Study on Entrepreneurship Awareness Camp for technical education students using Kirkpatrick's Model (Case Study: N | T.Sakthi and A.Arul Marcel Moshi |
| 23 | Advanced Materials Behavior & Characterization - (ICAMBC'2020) | International Conference Presentation | Mattest Research Academy, Chennai | Mechanical property analysis on powderized tamarind seed - palm natural fiber hybrid composites | P.Jeyaprakash, A.Arul Marcel Moshi, S.Rathinavel and A.Ganesh Babu |
| 24 | Future Technologies in Manufacturing, Automation, Design & Energy | International Conference Presentation | National Institute of Technology, Puducherry | Frictional Wear Behaviour of Aluminium 7075 reinforced with nano tungsten carbide and molybdenum disulphide hybrid metal matrix composite | M.Vishnu Vinayak, D.Vignesh Kumar, S.Arulselvan, C.Veera Ajay and A.Arul Marcel Moshi |
| 25 | Recent Developments in Material Science and Applications (ICRDMSA 2020) | International Conference Presentation | National Institute of Technology, Puducherry | Characterization of Metal Matrix Composites reinforced with suitable reinforcement agents – A Comprehensive Review | S. Granesan, S. Deepak Ganesh and A. Arul Marcel Moshi |

| Sr | Name of the Conference | Event Type | Name of the Institution or Organization | Title of the Paper | Authors |
|----|--|---------------------------------------|---|--|--|
| 26 | RECENT ADVANCEMENTS IN MECHANICAL ENGINEERING, ICRAME 2021 | International Conference Presentation | Francis Xavier Engineering College, Tirunelveli | Grey-Fuzzy Modeling and Analysis of Optimizing Turning Process Parameters for Stainless Steel Material | D. Devamonish, S. Somesh Sbramanian and A. Arul Marcel Moshi |

FDP/ Workshop/ Seminar/ Conference Programs Organized

| Sr | Name of the Event | Event Type | Name of the Funding Agency | Amount received from funding Agency | Role |
|----|--|-----------------------------|---|-------------------------------------|--------------|
| 1 | Industry Oriented Non Destructive Testing Methods and Training | National Workshop | Indian Society for Technical Education (ISTE) | ₹ 10,000.00 | Co-Ordinator |
| 2 | Codes And Standards Webinar Series for Alumni of NEC | National Seminar | Nil | ₹ 0.00 | Co-Ordinator |
| 3 | Codes and Standards in Mechanical Engineering | Faculty Development Program | Nil | ₹ 0.00 | Co-Ordinator |

Guest Lecture Delivered

| Sr | Name of the Event / Program | Name of the Institution / Organization | Title of the Lecture delivered | From | To |
|----|-----------------------------|---|--------------------------------|------------|------------|
| 1 | GATE coaching class | Government College of Engineering, Tirunelveli. | Manufacturing Technology | 12-12-2019 | 12-12-2019 |

Faculty Research Publications

| Sr | Title of the Paper | Name of the Journal | Year of Publication | Authors | DOI (Digital Object Identifier System) |
|----|--|--|---------------------|---|---|
| 1 | Comparative Analysis on Classical Laminated Plate Theory and Higher Order Lamination Plate Theory for Cross-Ply FRP Composite Structures | Journal of Computational and Theoretical Nanoscience | 2017 | Ramaswamy.S, Selwin Rajadurai.J and Arul Marcel Moshi.A | https://doi.org/10.1166/jctn.2017.6968 |
| 2 | Software analysis on free edge stresses in the composite laminates using various approaches and its applications | Applied Mathematics and Information Sciences | 2019 | Ramaswamy.S, Selwin Rajadurai.J and Arul Marcel Moshi.A | http://dx.doi.org/10.18576/amis/13S133 |

| Sr | Title of the Paper | Name of the Journal | Year of Publication | Authors | DOI (Digital Object Identifier System) |
|----|---|--|---------------------|--|---|
| 3 | A Novel Analysis on Bamboo - GFRP Hybrid Composite Structures for Mechanical Strength under Different Lamina Orders | AIP Conference Proceedings | 2019 | Arul Marcel Moshi.A, Madasamy.S, Sundara Bharathi S.R., Periyamayaganathan.P and Aravind Prabharan | https://doi.org/10.1063/1.5117941 |
| 4 | Design and analysis of roto – Cylindrical wing for a drone aircraft | Materials Today Proceedings | 2020 | Harikamal Pitchiah and A.Arul Marcel Moshi | https://doi.org/10.1016/j.matpr.2019.07 |
| 5 | Multi Objective Optimization of CNC Turning Process Parameters with Acrylonitrile Butadiene Styrene Material | Materials Today Proceedings | 2020 | Sundara Bharathi.S.R., Arul Marcel Moshi.A, Ravindran.D, Rajeshkumar.R and Palani Kumar | https://doi.org/10.1016/j.matpr.2019.09 |
| 6 | Optimization of Various Natural Ester Oils Impregnated Nomex Paper Performance in Power Transformer Applications under Different Ageing Conditions | International Journal of Recent Technology and Engineering | 2019 | S.Senthil Kumar, A. Arul Marcel Moshi, S.R.Sundara Bharathi and K.Karthik Kumar | https://doi.org/10.1016/10.35940/ijrte.C |
| 7 | Effective Techniques for Energy conservation in Buildings | Materials Today: Proceedings | 2021 | A. Arul Marcel Moshi, S. Guruvasanth, P. Melchisedec Samuel, Stephen S Billigraham | https://doi.org/10.1016/j.matpr.2020.02 |
| 8 | Experimental investigation on the performance enhancement of single basin double slope solar still using kanchey marbles as sensible heat storage materials | Materials Today: Proceedings | 2021 | N. Muthu Saravanan, S. Rajakumar and A. Arul Marcel Moshi | https://doi.org/10.1016/j.matpr.2020.05 |
| 9 | Study on the influence of temperature and vibration on indications of Liquid Penetrant Testing of A516 Low carbon steel | Materials Today: Proceedings | 2021 | Manikandan K.R., Ashwin Sivagurunathan P, Ananthan S.S., Arul Marcel Moshi A and Sundara Bharathi S.R. | https://doi.org/10.1016/j.matpr.2020.05 |
| 10 | Effectiveness measurement study on entrepreneurship awareness camp for technical education students using Kirkpatrick's model | Materials Today: Proceedings | 2021 | T Sakthi, A Arul Marcel Moshi | https://doi.org/10.1016/j.matpr.2020.08 |
| 11 | Mechanical property analysis on powderized tamarind seed-palm natural fiber hybrid composites | Materials Today: Proceedings | 2021 | P Jeyaprakash, A Arul Marcel Moshi, S Rathinavel, A Ganesh Babu | https://doi.org/10.1016/j.matpr.2020.10 |
| 12 | Mechanical property analysis on bamboo-glass fiber reinforced hybrid composite structures under different lamina orders | Materials Today: Proceedings | 2021 | K Vijaya Kumar, A Arul Marcel Moshi, J Selwin Rajadurai | https://doi.org/10.1016/j.matpr.2020.08 |
| 13 | Characterization of Metal Matrix Composites reinforced with suitable reinforcement agents—A Comprehensive Review | IOP Conference Series: Materials Science and Engineering | 2020 | S Granesan, S Deepak Ganesh and A Arul Marcel Moshi | https://doi.org/10.1088/1757-899X/988/ |

| Sr | Title of the Paper | Name of the Journal | Year of Publication | Authors | DOI (Digital Object Identifier System) |
|----|---|---|---------------------|--|---|
| 14 | Characterization of a new cellulosic natural fiber extracted from the root of Ficus religiosa tree | International Journal of Biological Macromolecules | 2020 | A. Arul Marcel Moshi, D. Ravindran, S. R. Sundara Bharathi, S. Indran, S.S. Saravanakumar and Yucheng Liu | https://doi.org/10.1016/j.ijbiomac.2019. |
| 15 | Characterization of surface-modified natural cellulosic fiber extracted from the root of Ficus religiosa tree | International Journal of Biological Macromolecules | 2020 | A. Arul Marcel Moshi, D. Ravindran, S.R. Sundara Bharathi, S. Indran and G. Suganya Priyadharshini | https://doi.org/10.1016/j.ijbiomac.2020. |
| 16 | Characterization of natural cellulosic fiber extracted from Grewia damine flowering plant's stem | International Journal of Biological Macromolecules | 2020 | A. Arul Marcel Moshi, D. Ravindran, S.R. Sundara Bharathi, S.R. Padma, S. Indran and D. Divya | https://doi.org/10.1016/j.ijbiomac.2020. |
| 17 | Characterization of New Natural Cellulosic Fibers – A Comprehensive Review | IOP Conf. Series: Materials Science and Engineering | 2019 | Arul Marcel Moshi,A, Ravindran.D, Sundara Bharathi.S.R, Suganthan.V and Kennady Shaju Singh.G | https://doi.org/10.1088/1757-899X/574/ |
| 18 | Regression and Grey relational analysis on friction and wear behavior of AA6061/Al ₂ O ₃ /Si ₃ N ₄ /graphite hybrid nano composites | Materials Research Express | 2019 | P.Hariharasakthisudhan, A.Arul Marcel Moshi, S.R.Sundara Bharathi and K.Logesh | https://doi.org/10.1088/2053-1591/ab1c |
| 19 | Mechanical properties and microstructure of A356 alloy reinforced AlN/MWCNT/graphite/Al composites fabricated by stir casting | Materials Research Express | 2019 | K. Logesh, P. Hariharasakthisudhan, A.Arul Marcel Moshi, B. Surya Rajan and K. Sathickbasha | https://doi.org/10.1088/2053-1591/ab5f |
| 20 | Multi response optimization of CNC turning parameters on Austenitic Stainless Steel 303 using Taguchi based Grey Relational Analysis | Transactions of the Canadian Society for Mechanical Engineering | 2020 | S.R. Sundara Bharathi, D. Ravindran and A. Arul Marcel Moshi | https://doi.org/10.1139/tcsme-2019-025 |
| 21 | Effect of multi-walled carbon nano-tube on mechanical behavior of glass laminate aluminum reinforced epoxy composites | Polymer Composites | 2020 | K. Logesh, P. Hariharasakthisudhan, B. Surya Rajan, A. Arul Marcel Moshi and V. Khalkar | https://doi.org/10.1002/pc.25757 |
| 22 | Optimization of transformer oil blended with natural ester oils using Taguchi-based grey relational analysis | Fuel | 2021 | Subburaj Senthilkumar, Alagar Karthick, R Madavan, A Arul Marcel Moshi, SR Sundara Bharathi, S Saroja, C Sowmya Dhanalakshmi | https://doi.org/10.1016/j.fuel.2020.1196 |
| 23 | Enhancing the fresh water produced from inclined cover stepped absorber solar still using wick and energy storage materials | Environmental Science and Pollution Research | 2021 | Vignesh Kumar R, Alagar Karthick, Manoj Praveen V.J., Arul Marcel Moshi A., A. Muthu Manokar and R. Sathyamurthy | https://doi.org/10.1007/s11356-020-120 |

| Sr | Title of the Paper | Name of the Journal | Year of Publication | Authors | DOI (Digital Object Identifier System) |
|----|---|---|---------------------|--|---|
| 24 | Experimental investigation of surface roughness and chip morphology during machining of austenitic stainless steel 303 with pvd coated (TiAlN) insert | Surface Topography: Metrology and Properties | 2021 | S. R. S. Bharathi, D. Ravindran & A. A. M. Moshi | https://doi.org/10.1088/2051-672X/abfc |
| 25 | Process-parameter optimization of WEDM with Inconel 825 alloy using GRA | Materiali in tehnologije / Materials and technology | 2021 | Arulselvan Subburaj, Ravindran Durairaj, Arul Marcel Moshi Antony Joseph Decruz, Vignesh Kumar Dharmaraj | https://doi.org/10.17222/mit.2020.120 |
| 26 | Optimizing the ultrasonication effect in stir-casting process of aluminum hybrid composite using desirability function approach and artificial neural network | Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications | 2021 | K.Logesh, P.Hariharasakthisudhan and A.Arul Marcel Moshi | https://doi.org/10.1177/1464420721102 |

Membership in Professional Societies

| Sr | Name of the Society / Organization | Type of Membership | Membership ID |
|----|--|--------------------|---------------|
| 1 | Institute of Engineers | Associate Member | AM161680-6 |
| 2 | Indian Society for Technical Education (Staff Chapter) | Lifetime Member | LM 128494 |

Book / Book Chapters Published

| Sr | Name of the Book | Name of the Chapter | Authors | Publisher | ISSN Number |
|----|--|---|---|-----------|---------------|
| 1 | Numerical Optimization in Engineering and Sciences | TIG Welding Process Parameter Optimization for Aluminium Alloy 6061 Using Grey Relational Analysis and Regression Equations | A Arul Marcel Moshi, D Ravindran, SR Sundara Bharathi, F Michael Thomas Rex, P Ramesh Kumar | Springer | 2194-5365 |
| 2 | Metal-Organic Framework Composites: Volume II | Significance of Metal Organic Frameworks Consisting of Porous Materials | R Kumar, A Arul Marcel Moshi, SR Sundara Bharathi, S Sivaganesan, C Dhanasekaran, P Senthamaraikannan, SS Saravanakumar, Anish Khan | CRC Press | 9780429346262 |
| 3 | Recent Advances in Manufacturing, Automation, Design and Energy Technologies | Grey-Fuzzy Modelling and Analysis of Optimizing Turning Process Parameters for Stainless Steel Material | V Jegan Prasath, R Karthick Kannan, R Shanmuga Mugesh, N Sugeesh, SR Bharathi, A Moshi | Springer | 2195-4364 |

