

THANGAPANDIAN N



54, Subash Chandrabose Road
Eswari Nagar Extension
Selaiyur, Tambaram
Chennai – 600 073
INDIA

Tel: +91 9944247295

E-mail: ntp@aubit.edu.in
erpandian@live.com

EDUCATION

August 2011- April 2017

PhD in Mechanical Engineering

Faculty of Mechanical Engineering
Anna University, Chennai-600 025, INDIA

Thesis: Experimental and Numerical Study of Repetitive
Corrugation and Straightening on AA 5052 & AA 6063
Aluminium alloys

Sep 2008- May 2010

Master of Engineering (Engineering Design)

Department of Mechanical Engineering
College of Engineering Guindy, Anna University, Chennai

Percentage of Mark: CGPA 7.3/10 (First Class)

Thesis: Synthesis and Characterization of High
performance polymer nanocomposites using CNTs
(Carbon nanotubes) as filler

Aug 2004 - April 2008

Bachelor of Engineering (Mechanical Engineering)

Department of Mechanical Engineering
Sethu Institute of Technology, Kariapatti
Anna University, Chennai. INDIA

Percentage of Mark:74% (First Class)

Project: Energy Conservation Methods in Boilers of Thermal
Power Station II, at Neyveli Lignite Corporation, Neyveli

PROFESSIONAL POSITIONS

1 Dec 2025 – Till now

Assistant Professor

University College of Engineering, BIT Campus
Anna University
Trichirappalli

1 July 2024 – 30 Nov 2025

Associate Professor,
Department of Mechanical Engineering
St. Joseph's Institute of Technology,
Chennai – 600 119

14 June 2017 – 30 June 2024

Assistant Professor,
Department of Mechanical Engineering
St. Joseph's Institute of Technology,
Chennai – 600 119

01 April 2012 – Jan 2017

Senior Research Fellow (CSIR),
Department of Mechanical Engineering
College of Engineering Guindy
Anna University, Chennai -600 025

26 June 2010 - 27 May 2011

Assistant Professor,
Department of Mechanical Engineering
Sree Sastha Institute of Engineering and Technology,
Chembarambakkam, Chennai – 600 123

PROFESSIONAL MEMBERSHIP

- Life Member, Indian Institute of Metals (No. 56660)
- Senior Member, INAE

AREAS OF INTEREST

- Engineering Materials and Metallurgy
- Engineering Mechanics

PROPOSALS / FUNDING DETAILS

- Received a sum of 20,000 INR for the Partial assistance to conduct a workshop on 29 & 30th November, 2019 entitled "Nanotechnology – Mechanical Engineers Perspective" from **Tamilnadu State Council for Science and Technology**.
- Recommended to receive travel grant through **Young Scientist - International Travel support**, SERB, India to attend "**International Mechanical Engineering Congress and Exposition, USA** (30 October, 2022 to 03 November, 2022)

Ph.D Guidance

1. Mr. D. Murali (Reg. No 23142997148)
2. Mr. I.S.Merin Sathya Dhas (Reg. No 23142997193)

Books / Book Chapters Contributed

- 1 Reviewer of Material Science Book for **AICTE project of Technical Books Translation in Tamil** Language for 2nd year BE/B.Tech and Diploma courses.
- 2 **N Thangapandian** and M.Satthiyaraju “**Effect of reinforcements on the tribological properties of Polymer composites**”, in **Composite and Composite Coatings: Mechanical and Tribology Aspects**, ISBN - 9780367625672 (Editor : Md. Thariq Bin Haji Hameed Sultan, S. Arulvel, K. Jayakrishna), CRC Press, 2022, USA
3. Monsuru Ramoni, Ragavanantham Shanmugam. **N.Thangapandian**, M.Vishnuvarthanan “**Challenges in Additive Manufacturing for Metals and Alloys**”, in **Innovations in Additive Manufacturing**” ISBN - 978-3-030-89400-9 (Editor : Adam Khan M, JT Winowlin Jappes), Springer, 2022

International Journals

- 1 D. Murali, **N. Thangapandian**, S. Prathap Singh, Poongavanam GaneshKumar, “**EDM Machining characteristics of Additive-Manufactured and conventional Copper tools: A comparative study**”, Materials and Manufacturing Processes, 40(16), 2025, pp 2218-2230 (SCIE I.F-4.7)
- 2 K Gnanasekaran, **N. Thangapandian**, D. Elil Raja, Tushar Sonar, S. Vinoth Kumar & Ramesh Krishnan, “**A comprehensive analysis of the EDM parameters of cryogenically treated EN8 steel in accordance with the Taguchi method**”, International Journal on Interactive Design and Manufacturing (IJIDeM), 2025
- 3 Poongavanam GaneshKumar, **N. Thangapandian**, Seong Cheol Kim, Vanaraj Ramkumar, Saravanan Pandiaraj, Abdullah N. Alodhay, “**Enhancing Solar Still Performance with Nano-Coated Seashells and Surface-Modified Absorber Plates for Clean Water Production**”, Solar Energy (SCIE I.F-6.0) 285, 2025.
- 4 Sathishkumar, N., Arumaikkannu, G., **Thangapandian, N.**, Hem Anand, E.A, “**Exploring the impact of cryogenic treatment on detonation spray coated M2 high speed steel**”, Materials and Manufacturing Processes, (SCIE I.F-4.1) 39(7), (2024) 2081-2098.
- 5 Satthiyaraju Mani, Ananthakumar Kasi, **Thangapandian Nagamalai**, Vivekananda, Arul Natarajan, Asiful H. Seikh, Muthukumar Krishnan, Sathish Kumar Ramachandran, “**Enhancement of piezoelectric responses of electrospun PVDF nanofibers through mechanical stretching and annealing process**”, Materials Science and Engineering B (SCIE I.F-3.9) 307, (2024), 117538
- 6 J. Jenix Rino, A.S. Vivekananda, **N.Thangapandian**, S. Balasivanandha Prabu, “**Mechanical and wear behaviour of Al-Si5Cu3/ ZrB2 in-situ reinforced metal matrix composite**”, International Journal of Metal casting (SCIE I.F-2.6) (2024).
- 7 V.Babu, **N. Thangapandian**, A. Chidambaram, Balasivanandha Prabu Shanmugavel, “**Optimization of process parameters of cyclic expansion extrusion process for effective grain refinement of Al-Mg-Si alloy**” Journal of Materials Engineering Performance, (JAN

- 8 **N. Thangapandian***, M. Saththiyaraju, P. Ganesh Kumar, S. Vinoth Kumar, **“Investigation of vibration, flexural, tribological and flame retardant properties on rubber crumb reinforced polymer composites”** Progress in Rubber Plastics and Recycling Technology, (DEC 2023) (SCI I.F-1.1) ISSN – 1477-7606
- 9 P. Ganesh Kumar, **N. Thangapandian**, V.S. Vigneswaran, P. Sundaram, A. Sathishkumar, Sung Chul Kim and Rajendran Prabakaran **“Energy, exergy, economic and environmental evaluation of solar desalination system comprising different enhanced surface absorber plates”** Desalination, (JULY 2023) Vol. 565, pp - 116842 (SCI I.F- 9.9) ISSN - 0011-9164
- 10 Vinothkumar Sivalingam, Qian Zhou, Ganesh Manickajothi, Nimel Sworna Ross, Jie Sun, Munish Kumar Gupta, Mehmet Erdi Korkmaz, **Thangapandian Nagamalai “Understanding the machining characteristics of Al6082 hybrid metal matrix composites milled under cryogenic cooling conditions”** The International Journal of Advanced Manufacturing Technology, (OCT 2023), 129, pp 3387–3402 (SCI I.F- 3.4) ISSN - 0268–3768
- 11 **N.Thangapandian**, J. Jenix Rino*, S. Balasivanandha Prabu, **“Strain Inhomogeneity and grain refinement in AA6063 aluminum alloy subjected to Repetitive Corrugation and Straightening: comparison of experimental and Finite Element Analysis”** International Journal of Material Forming, (FEB 2022), vol. 15, pp 1-13 (SCI I.F- 2.4) ISBN – 1960-6206
- 12 Tarun John Thomas, **N Thangapandian**, D Sakthivel, Syed Mihad Syed Fakhir Mohideen, kathirvel Brindhadevi, Sakeenabi Basha, Ramya Ganesan*, **“Experimental analysis of C.I. Engine using plastic oil blended with aluminium oxide nanoparticle”**, Fuel, (MAR 2022), vol. 312, (SCI I.F- 6.609) ISSN- 0016-2361
- 13 G. Karthik Pandiyan*, T. Prabakaran, D. Jafrey Daniel, Vinothkumar Sivalingam, **N. Thangapandian**, **“Improvement on the machinability characteristics of AA6061-T6/15 wt. % SiC composites by Response Surface methodology”**, Surface Topography: Metrology and Properties, (SEP 2021), Vol.9, pp 1-15 (SCI I.F – 2.038) ISSN : 2051-672X
- 14 P. Ganesh Kumar, D. Sakthivadivel, **N. Thangapandian**, Mohammad Salman, Sung Chul Kim, Amrit Kumar Thakur **“Effects of ultrasonication and surfactant on the thermal and electrical conductivity of water - solar glycol mixture based Al₂O₃ nanofluids for solar-thermal applications”**, Sustainable Energy Technologies and Assessments, (Oct 2021), Vol. 47, pp 1-11 (SCI I.F – 8) ISSN: 2213-1396
- 15 Vinothkumar Sivalingam, Yanzhe Zhao, Ramkumar Thulasiram, Jie Sun*, **N Thangapandian**, **“Machining Behaviour, surface integrity and tool wear analysis in environment friendly turning of Inconel 718 alloy”**, Measurement, (APR 2021), Vol. 174 (SCI I.F – 5.131). ISSN: 0263-2241
- 16 P Ganesh Kumar*, R Prabakaran, D Sakthivadivel, **N Thangapandian**, R Velraj, Sung Chul Kim, **“Effect of shot blasting on droplet contact angle of carbon aided phase change nanocomposites”**, Surface Engineering, (JAN 2021), Vol. 37(8), pp 1002-1011 (SCI I.F – 2.23). ISSN: 02670844
- 17 Sung Chul Kim, Prabakaran R, D Sakthivadivel, **Thangapandian N**, Arpit Bhatia, P. Ganesh Kumar* **“Thermal Transport Properties of Carbon-Assisted Phase Change Nanocomposite”** Fullerenes, Nanotubes and Carbon Nanostructures, (July 2020), Vol 28, pp 925-933 (I.F – 1.648) ISSN: 1536-383X
- 18 **N. Thangapandian**, S. Balasivanandha Prabu, K.A. Padmanabhan, **“Effect of temperature on grain refinement in AA6063 aluminium alloy subjected to repetitive corrugation and straightening”**, Acta Metallurgica Sinica, (Jan 2019), Vol 32, pp 835-844 (SCI I.F – 2.4) ISSN: 1006-7191

- 19 **N. Thangapandian, S. Balasivanandha Prabu** “**Effect of combined Repetitive Corrugation and Straightening and rolling on the Microstructure and Mechanical properties of pure aluminium**”, *Metallography, Microstructure, and Analysis*, (Oct 2017), Vol 6, pp 481-488 ISSN: 2192-9270
- 20 **N. Thangapandian, S. Balasivanandha Prabu, K.A. Padmanabhan**, “**Effect of Temperature and Velocity of Pressing on Grain Refinement in AA5083 Aluminum Alloy During Repetitive Corrugation and Straightening Process**”, *Metallurgical and Materials Transactions A*, (Oct 2016), Vol 47A, pp 1-10 (SCI I.F – 2.8) ISSN: 1073-5623
- 21 **N. Thangapandian, S. Balasivanandha Prabu, K.A. Padmanabhan**, “**Effects of die profile on grain refinement in Al-Mg alloy processed by repetitive corrugation and straightening**”, *Materials Science and Engineering A*, (Jan 2016), Vol 649, pp 229-238 (SCI I.F – 6.4) ISSN: 0921-5093
- 22 **N. Thangapandian, S. Balasivanandha Prabu**, “**The role of corrugation die parameters on the mechanical properties of Aluminium alloy (AA 5083) processed by repetitive corrugation and straightening**”, *Journal of Materials Science and Chemical Engineering*, (2015), Vol 3, pp 208-212
- 23 **N. Thangapandian, S. Balasivanandha Prabu, K.A. Padmanabhan**, “**On the role of Experimental variables in the repetitive corrugation and straightening**”, *Procedia Engineering*, (Sep 2017), Vol 207, 1457-1462 ISSN: 1877-7058

Indian Journal

- 1 **N. Thangapandian, S. Balasivanandha Prabu** “**Effect of pressing speed on Al-Mg-Si aluminium alloy processed by Repetitive Corrugation and Straightening**”, *Indian Journal of Science and Technology*, Vol 9 (2016), pp 1-4

International Conferences

- 1 **N. Thangapandian, S. Balasivanandha Prabu**, “**Synthesis and Characterization of MWNTs and EPOXY/MWNTs Nanocomposites**” International Conference on Nano Science & Nano Technology (**ICONN-2010**), SRM University, Kattankulathur during February 24-26, 2010,
- 2 **N. Thangapandian, A. Preetam, S. Balasivanandha Prabu, S. Senthil Kumaran**, “**Mechanical Properties of commercially pure copper after Repetitive Corrugation and straightening**”, *Proceedings of the second International conference on advances in materials processing and characterization (AMPC2013)* Organised by the Department of Mechanical Engineering, Anna University, Chennai-25, during 6-8 February 2013, Allied Publishers, ISBN:978-81-8424-819-7, pp.288-292
- 3 **N. Thangapandian, S. Balasivanandha Prabu, R. Paskaramoorthy**, “**Synthesis and Characterization of High Performance Polymer Nanocomposite Using Carbon Nanotubes as Fillers**” ASME 2013 Manufacturing Science and Engineering Conference (**MSEC2013**), University of Wisconsin-Madison, during June 10-14, 2013, ASME Proceedings, ISBN: 978-0-7918-5545-4, pp. V001-1A070
- 4 **N. Thangapandian, S. Balasivanandha Prabu**, “**Effect of pressing speed on AA 5083 Aluminium alloy processed by repetitive corrugation and straightening**” International Conference on Mechanical Materials and Manufacturing

Systems, Sri Sairam Engg College, Chennai, Jan 27-28, 2016

- 5 **N. Thangapandian**, S.Balasivanandha Prabu, **“The role of corrugation die parameters on the mechanical properties of Aluminium alloy (AA 5083) processed by repetitive corrugation and straightening”** International Conference on Metal Materials and Engineering, Shanghai, China, July 19-21, 2015
- 6 **N. Thangapandian**, S. Balasivanandha Prabu, K.A. Padmanabhan, **“On the role of Experimental variables in the repetitive corrugation and straightening”** 12th International Conference on Technology of Plasticity (ICTP2017), University of Cambridge, UK, 17-22 Sep 2017
- 7 **N. Thangapandian**, **S.** Ragavanandham, M. Thirumal Azhagan, Mohanavel Vinayagam, Seth Dennison **“A Study on the Effect of Graphene on the Vibrational and Flame Retardant Characteristics of the GFRP Composites”** ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022) Oct 30 - Nov 03, 2022, Columbus, Ohio, USA
- 8 **N. Thangapandian**, R. Manivannan, S. Ragavanandham, A. S. Vivekanandha, V. Rangarajan, **“Influence of heat treatment on the microstructural properties of wire arc additively manufactured Inconel 625 alloy”** ASME 2023 International Mechanical Engineering Congress and Exposition (IMECE2023) Oct 29 - Nov 02, 2023, New Orleans, Louisiana, USA

LECTURE DELIVERED / CONFERENCE SESSION CHAIRED

- 1 Delivered a webinar on **“Tools for Effective Research Writing”**, Jointly organized by St.Joseph's Institute of Technology, Chennai and Institution of Engineers (Kanchipuram Centre) on 29th May 2020.
2. Delivered a Lecture on **“Severe Plastic Deformation on Alloys and Composites”**, in **AICTE sponsored Virtual STTP on Composite Materials: Micro to Nano Fabrication, Characterization and modelling including Additive Manufacturing** organized by Department of Mechanical Engineering, Rajalakshmi Engineering College, Chennai on 14th July 2020.
3. Chaired a session in the National level conference on **“Challenges and Innovation in Engineering and Technology - 2021”** on 19.03.2021 organized by Ramco Institute of Technology, Rajapalayam, INDIA.
4. Delivered a lecture on **“Mechanical Properties and deformation mechanisms”** in the FDP on ME3392 – Engineering Materials and Metallurgy on 23.09.2024 organized by Department of Mechanical Engineering, JCT College of Engineering and Technology, Coimbatore.
5. Delivered a Lecture on **“Technology for Innovative Teaching”**, in **AICTE ATAL FDP on Engineering Solutions for a Sustainable Future** organized by Department of Mechanical Engineering, KCG College of Technology, Chennai on 7th November 2024.

FDP/STTP (5 Days and Above) Participated / Online courses Completed

Sponsored FDP/STTP	Online courses
1) ATAL Sponsored FDP on “ 3D Printing and Design ”	• NBA Accreditation and Teaching-Learning in Engineering (NATE) - NPTEL
2) ATAL Sponsored FDP on “ Technological Advancement in Manufacturing and Industry 4.0 ”	• Metal Additive Manufacturing - NPTEL
3) ATAL Sponsored FDP on “ Engineering Solutions for Sustainable Future ”	• Fundamentals of Additive Manufacturing - NPTEL
4) ATAL Sponsored FDP on “ ADVANCES IN METAL ADDITIVE MANUFACTURING ”	• Rapid Prototyping – NPTEL
5) UGC and NAAC Sponsored FDP on “ NAAC Revised Guidelines - A Paradigm Shift in Quality Initiatives ”	• Introduction to Materials Science - NPTEL
6) TEQIP Sponsored FDP on “ Applications of Finite Element Analysis (FEA) and Computational Dynamics (CFD) using ANSYS ”	• Introduction to Additive Manufacturing Processes -- Coursera • Material Extrusion - Coursera • Selective Laser Sintering and Metal Laser Powder Bed Fusion - Coursera

AWARDS/PRIZES

1. Qualified in **GATE 2008**
2. Recipient of **CSIR & UGC Senior Fellowship**

I do hereby confirm that the above information given above is to the best of my knowledge and belief.

Place :

Yours faithfully,

Date :

(N. THANGAPANDIAN)