

BIO-DATA

1. Name and full correspondence address
DR NILANJAN DAS CHAKLADAR
Mechanical Engineering Department
Indian Institute of Technology Kharagpur
Kharagpur, INDIA 721302

2. Email(s) and contact number(s)
ndaschakladar@mech.iitkgp.ac.in;
M: +91844953215; L: +9132222 82926

3. Institution: Indian Institute of Technology Kharagpur, Kharagpur, India

4. Date of Birth: 14/12/1985

5. Gender (M/F/T): M

6. Category Gen/SC/ST/OBC: Gen

7. Whether differently abled (Yes/No): No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B. Prod. E	2008	Production Engineering	Jadavpur University, India	9.15 out of 10 (CGPA) – University Gold Medalist
2.	M.Tech	2010	Manufacturing Science and Engineering	Indian Institute of Technology Kharagpur, India	9.84 out of 10 (CGPA) – Top 2
3.	PhD	2014	Mechanical Engineering	University of Manchester, UK	Pass

9. PhD thesis title: **Multiscale modelling of fibre assemblies**
Guide's name: **Dr Parthasarathi Mandal**
School of Mechanical, Aerospace and Civil Engineering
The University of Manchester, Manchester, UK
Year of Award: 2014

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To
1.	Assistant Professor Grade - I	IIT Kharagpur, INDIA	Apr 2019	-
2.	Program Manager, Automated Manufacture of Advanced Composites	University of New South Wales, Sydney, Australia	Aug 2018	Mar 2019
3.	Research fellow, Tribology Research Group	University of Leeds, UK	Nov 2015	Mar 2018
4.	Research fellow, Composites Research Group	University of Nottingham, UK	May 2014	Nov 2015

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1	Chartered Engineer, MIMechE, UK	Institution of Mechanical Engineers, UK	2015
2	Full Funded International PhD Scholarship	University of Manchester, UK	2010
3	University Gold Medal	Jadavpur University, India	2008
4	Certificate of Distinctive Performance	5 th National Science Olympiad	2001

12. Research grants (on-going/completed/sanctioned)

S No	Funding body	Topic	PI/Joint-PI/Co-PI	Amount (Cr)	Duration	Status
1	Ministry of Heavy Industries	Inline detection of defects and robotic solution for wind blade manufacturing	Joint PI, PI: Prof SK Pal	4.99	Sanctioned	Sanctioned
2	NMRL, DRDO	Design and analysis of a filament wound FRP composite pipe along with a valve fitting for naval application	PI	0.084	2022	Completed
3	NRB, DRDO	Fabrication and modelling of an impact tolerant composite for naval applications	PI, Co-PI: Prof Kiran Vijayan	0.3392	2023-2026	On-going
4	SAC, ISRO	Fabrication and modelling of a hybrid composite antenna reflector	PI, Co-PI: Prof Arghya Deb	0.30	2023-2026	On-going
5	Ministry of Textiles	Development of biocompatible glass fibre composite for healthcare applications	PI, Co-PI: Prof Santanu Dhara	2.03	2022-2024	On-going
6	SERB-CRG	Numerical modelling and tailoring of residual stress during ultrasonically assisted abrasive peening	PI, Co-PI: Prof Soumitra Paul	0.3542	2021-2024	On-going
7	IIT Kharagpur (ISIRD Scheme)	Development of a defect free composite fabrication technique	PI	Rs 0.28	2019-2022	Completed
			TOTAL	8.3774		

13. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Dewangan, B.,	Effects of porosity on the cure kinetics and residual	Materials Today Communications	35	105711	2023

	Chakladar, N.D.	stress of a porous polymer				
2	Yadav, R., Chakladar N.D., Paul, S.	Modelling and experimental validation of burr control in micro milling of metals	Materials Today Communications	35	106205	2023
3	Yadav, R., Chakladar N.D., Paul, S.	Effects of tailored residual stress on micro end milling: numerical modelling and validation	International Journal of Advanced Manufacturing Technology	Accepted	Accepted	2023
4	Yadav, R., Chakladar N.D., Paul, S.	Micro-milling of Ti-6Al-4V with controlled burr formation	International Journal of Mechanical Sciences	231	107582	2022
5	Yadav, R., Chakladar N.D., Paul, S.	A dynamic recrystallization based constitutive flow model for micro-machining of Ti-6Al-4V	Journal of Manufacturing Processes	77	463	2022
6	Choudhary, A., Chakladar N.D., Paul, S.	Identification and estimation of defects in high-speed ground C/SiC ceramic matrix composites	Composite Structures	261	113274	2021
7	Garg, N., Chakladar, N. D., Prusty, B. G., Song, C., Phillips, A. W.	Modelling of laminated composite plates with weakly bonded interfaces using scaled boundary finite element method	International Journal of Mechanical Sciences (IF: 4.134)	170	105349	2020
8	Oromiehie, E., Chakladar, N. D., Rajan, G., Prusty, B. G.	Online monitoring and prediction of thermomechanics of AFP based thermoplastic composites	Sensors, MDPI (IF:3.031)	19	1310	2019
9	Chakladar, N. D., Gao, L., Hall, R. M., Hewson, R. W	Computational evaluation of wear and roughness in mixed lubrication regime	Orthopaedic Proceedings, Special Issue of the British Editorial Society of the Bone and Joint Surgery (IF: 4.301)	100-B	90	2018
10	Chakladar, N. D., Parsons, A. J., Harper, L. T.	Optimization of composite bone plates for ulnar transverse fractures	Journal of Mechanical Behaviour of Biomedical Materials (IF:3.485)	57	334	2015
11	Chakladar, N. D., Mandal, P., Potluri, P.	Effects of inter-tow angle and tow size on carbon fibre friction	Composites Part A: Applied Science and Manufacturing (IF:6.282)	65	115	2014
12	Chakladar, N. D., Pal, S. K., Mandal, P.	Drilling of woven glass fibre reinforced plastic- experimental and finite element study	International Journal of Advanced Manufacturing Technology (IF: 2.496)	58	267	2012
13	Dutta, S., Dutta, S., Chakladar,	Detection of tool condition from the turned surface images using an accurate	Precision Engineering (IF:2.685)	36	458	2012

	N. D., Pal, S. K., Mukhopadhyay, S.	grey level co-occurrence technique				
14	Chakladar, N. D. , Das, R., Chakroborty, S.	A digraph-based expert system for non-traditional machining processes selection	International Journal of Advanced Manufacturing Technology (IF: 2.496)	43	226	2009
15	Chakladar, N. D. , Chakroborty, S.	A combined TOPSIS-AHP method based approach	Proceedings of Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture (IF:1.752)	222	1613	2008

14. Any other Information:

PhDs – 8 (on-going) in the areas of composite manufacturing, modelling of manufacturing processes and tribology

Google scholar: <https://scholar.google.com/citations?user=0dAqkqwAAAAJ&hl=en>

Personal website: <https://sites.google.com/view/nilanjan-das-chakladar/advanced-composites-engineering-laboratory>

Citations: 500+, h-index: 9

Conference Presentations:

- Yadav R, **Chakladar ND**, Paul S (2022). Finite Element Modelling of Burr during Micro-milling of Ti alloy, 23rd Int Conf Advances in Materials and Processing Technologies, 10-14, October 2022, Portorož, Slovenia.
- Yadav R, **Chakladar ND**, Paul S (2022). Modelling of Micro-Machining of Ti-6AL-4V: Strain Gradient Interpretation. Int Conf Precision, Micro, Meso and Nano Engineering (COPEN), 2022, Dec 08-10, 2022 at IIT Kanpur.
- Garg N, **Chakladar ND**, Prusty BG, Song C, Phillips A (2019). Scaled boundary finite element-based method for crack initiation and propagation in fibre reinforced composite structures. 22nd Int Conf. Composite Materials, Melbourne, Australia, Aug 11-16, 2019.
- Shamshuddoha Md, **Chakladar ND**, Oromiehie E, David M, Prusty, BG (2019). Performance monitor and prediction of a biaxially loaded thin composite tube. 22nd Int Conf. Composite Materials, Melbourne, Australia, Aug 11-16, 2019.
- Alkatheri A, **Chakladar ND**, Hall RM (2018). How comparable are the analytical models with the numerical assessment of hip prosthesis wear, 62nd Annual Congress of the Korean Orthopaedic Association, Seoul, South Korea, Oct 18-20, 2018.
- Gao L, Lunn D, Redmond A, **Chakladar ND**, Pieri ED, Ferguson S, Hall RM (2018). Effect of body-mass-index of virtual patients on the wear of lubricated hip joints in gait cycles – a numerical study, 15th Int. Symp. On Comp Methods in Biomechanics and Biomedical Engineering, Lisbon, Portugal, Mar 26-29, 2018.
- **Chakladar ND**, Gao L, Hall RM, Hewson RW (2018). Prediction of wear and evolution of roughness in total hip replacements, 15th Int. Symp. On Comp Methods in Biomechanics and Biomedical Engineering, Lisbon, Portugal, Mar 26-29 2018.
- **Chakladar ND**, Gao L, Hall RM, Hewson RW (2017). Computational evaluation of wear and roughness in artificial hip replacements, 30th Annual Congress International Society for Technology in Arthroplasty, Seoul, South Korea, Sep 20-23 2017.
- **Chakladar ND**, Gao L, Hall R, Hewson R (2017). Evolution of wear and surface roughness in mixed lubrication regime, 6th World Tribology Congress, Beijing, China, Sep 17-22 2017.

- **Chakladar ND**, Mandal P, Potluri P (2013). Multi-scale modelling of fibre assemblies, Proc.19th Int. Conf. Composite Materials, Montreal, Canada, July 2013, pp 4902-4912.
- Mandal P, **Chakladar ND**, Potluri P, Hearle J (2013). Application of ABAQUS beam model to modelling mechanical properties of woven fabrics, Proc. 5th World Conf. on 3DFabrics and their Applications, Delhi, India, 16-17December 2013.
- **Chakladar ND**, Mandal P, Potluri P (2013). Finite element modelling of fibre bundles, Simulia Academic conference, Manchester, England, November 2013.
- Mandal P, **Chakladar ND**, Potluri P (2013). Finite element modelling of fibre assemblies using beam elements, Proc.1st Int. Conf. Digital Technologies for the Textile Industries, Manchester, UK, 5-6 September 2013.
- **Chakladar ND**, Mandal P, Potluri P (2013). Multi-scale modelling of compaction of fibre assemblies, Proc. Int. Conf. designing against deformation and fracture of composite materials: Engineering for integrity large composite structures, Cambridge, England, April 2013.
- **Chakladar ND**, Mandal P, Potluri P (2012). Experimental study on frictional behaviour of carbon fibres., Proceedings of PGR MACE Conference, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, UK, Dec 2011, pp 5-6.
- **Chakladar ND**, Pal SK, Mandal P (2010). Finite Element Estimation of Cutting Parameters in Drilling Glass Fiber Reinforced Plastic (GFRP) Plates, Nat. Conf. Recent Advances in Manufacturing Technology and Management (RAMTM 2010), 19th -20th February, 2010, Jadavpur University, Kolkata.