

BIO-DATA

1. Name and full correspondence address: Dr. Tanmoy Bose
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2. Email(s) and contact number(s): tanmoy.jgec04@gmail.com, 8436520880
3. Institution: National Institute of Technology Rourkela
4. Date of Birth: 26.04.1987
5. Gender (M/F/T): M
6. Category: Gen
7. Whether differently abled: No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	Bachelor of Technology	2008	Mechanical Engineering	Jalpaiguri Government Engineering College	71.4
2.	Master of Engineering	2010	Mechanical Engineering	Jadavpur University	85.5
3.	Doctor of Philosophy	2015	Mechanical Engineering	Indian Institute of Technology Khargpur	--

9. Ph.D thesis title Analytical and Numerical Models for Vibro-Acoustic Studies of Thin Isotropic Rectangular and Circular Cracked Plates
Guide's Name: Prof. Amiya Ranjan Mohanty
Institute/Organization/University: Indian Institute of Technology Kharagpur
Year of Award: 2015

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Academy of Technology, West Bengal	February, 2015	December, 2015	Basic Rs. 32,480+ AGP Rs. 8000
2	Associate Professor	Academy of Technology, West Bengal	January, 2016	June, 2016	Basic Rs. 37,400+ AGP Rs. 9000
3	Assistant Professor	National Institute of Technology Meghalaya	June, 2016	November, 2017	Basic Rs. 26,140+ AGP Rs. 6000
4	Assistant Professor	National Institute of Technology Meghalaya	December, 2017	May, 2023	AGP 7000 in 7th payscale

4	Assistant Professor	National Institute of Technology Rourkela	June, 2023	Till date	AGP 8000 in 7th payscale
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11. Sponsored Projects (as PI & project value>20 lakhs)

Name of Agency	Title of project	Total Amount	Period of support	Completed /on-going
DST-SERB	Low cost, faster and accurate low velocity impact damage imaging along with depth profiling for Carbon Fibre Reinforced Composite Materials using Vibro-thermography and Concept of Local Defect Resonance	45.33 Lakhs	2020-2023	Ongoing
AR&DB	Fully acoustic testing of low-velocity impact damage in the composite plate using the concept of local defect resonance	24.3 lakhs	2022-25	Ongoing
CPRI (under MoP,GOI)	Development of Support Vector Machines Based Software for Cavitation Level Monitoring in a Francis Turbine	29.9 Lakhs	2022-24	Ongoing

12. Detail of patents.

S. No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/ Country	Status
1	Device for Peeling and Slicing of Pineapple	Tanmoy Bose, NIT Meghalaya	20213 10233 95 A	Not Granted	India	Filed, published on 18/06/2021
2	A Portable Impact Testing Device and a System	Tanmoy Bose, NIT Meghalaya	20213 10549 24 A	Not Granted	India	Filed, published on 07/01/2022, first examination report submitted, Technology transfer in process

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	T. Bose, S Roy	Defect resonance frequency of spherical pore within isotropic elastic solid	Ultrasonics	124	10675 9	2022
2	S Roy, T. Bose	Detection of mode frequencies for spherical cavity embedded within a mild steel plate	Journal of Vibration and Control	doi:10.1177/1077 5463211054933		2022
3	N. Hanuman, S. Roy, T. Bose	Resonant activation of different intermodulation frequencies using dual excitations	Ultrasonics	106	10613 8	2020
4	N.S.V.N. Hanuman, S. Roy, T. Bose	Detection of local defect resonance intermodulation peaks using bicoherence analysis	International Journal of Mechanical Sciences	163	1050 92	2019
5	S. Roy, T. Bose	Efficient determination of local defect resonance frequencies from bicoherence plots using double excitations	Mechanical Systems and Signal Processing	127	595– 609	2019

6	S. Roy, T. Bose , K. Debnath	Detection of Local Defect Resonance Frequencies using Bicoherence Analysis	Journal of Sound and Vibration	443	703-713	2019
7	T. Bose , A. R. Mohanty	Large amplitude axisymmetric vibration of a circular plate having a circumferential crack	International Journal of Mechanical Sciences	124	194–202	2017
8	T. Bose , A. R. Mohanty	Detection and monitoring of side crack in a rectangular plate using mobility	Journal of Vibration and Control	22 (2)	585-594	2016
9	T. Bose , A. R. Mohanty	Sound Radiation Response of a Rectangular Plate Having a Side Crack of Arbitrary Length, Orientation, and Position	Journal of Vibration and Acoustics, Transactions of ASME	137 (2)	210-219	2015
10	I. C. Geraldo, T. Bose , K. M. Pekpe, J. P. Cassar, A. R. Mohanty, K. Paumel	Acoustic monitoring of sodium boiling in a liquid metal fast breeder reactor from autoregressive models	Nuclear Engineering and Design	278	573-585	2014
11	T. Bose , A. R. Mohanty	Vibration analysis of a rectangular thin isotropic plate with a part-through surface crack of arbitrary orientation and position	Journal of Sound and Vibration	332 (26)	7123 - 7141	2013
12	S. Bhowmik, A. Chattopadhyay, T. Bose , S.K. Acharyya, P. Sahoo, J. Chattopadhyay, S. Dhar	Estimation of fracture toughness of 20MnMoNi55 steel in the ductile to brittle transition region using master curve method	Nuclear Engineering and Design	241 (8)	2831 - 2838	2011

14. Books/Reports/Chapters/General articles etc.

S. No.	Title	Author's Name	Book name, Page number	Publisher	Year of Publication
1	A Study of Chemical Treatment of Natural Fibers and Its Effect on the Mechanical Properties of Developed Composites	K. Debnath, S. Roy, T. Bose , S. Adhikari, V. Sinha and V. Rabha	Processing of Green Composites, 65-80	Springer	2019
2	Detection of Delamination in Fiber Metal Laminates Based on Local Defect Resonance	T. Bose , S. Roy, and K. Debnath	Reinforced Polymer Composites: Processing, Characterization and Post Life Cycle Assessment, 147-164	Wiley	2019
3	Non-Destructive Testing of Carbon Fibre Reinforced Polymer (CFRP) Composite Using Thermosonic Technique	T. Bose , N. Hanuman, S. Roy	Handbook of Research on Developments and Trends in Industrial and Materials Engineering, 348-365	IGI Global	2020
4	Shear Behaviour of the Delaminated Glass Fibre Reinforced Composite Laminates	M. Vashum, S. Roy, T. Bose	Advances in Mechanical Engineering, 617-625	Springer	2020

5	Detection of Local Defect Resonance Frequencies for Defect Imaging: A Nonlinear Ultrasound-Based Approach	S. Roy, T. Bose , K. Debnath	Advances in Mechanical Engineering, 1163-1172	Springer	2020
6	Iosipescu Shear Test of Glass Fibre/epoxy Composite with Different Delamination Geometries: A Shear Behaviour Study	T. Bose , S. Roy, NSVN Hanuman	Recent Advances in Layered Materials and Structures, 353-373	Springer	2021
7	An Analytical and Experimental Study of Nonlinear Intermodulation in Delaminated Composite Plate	NSVN Hanuman, S. Roy, T. Bose	Advances in Non-destructive Evaluation, 175-186	Springer	2021
8	Defect Detection in Delaminated Glass-Fibre/Epoxy Composite Plates Using Local Defect Resonance Based Vibro-Thermography Technique	S Roy, T Bose	Acoustic Emission-New Perspectives and Applications	IntechOpen	2022

15. International Conferences:

1. N. Hanuman, T Bose, Fully acoustic NDT for composite plate via LDR technique, 180th Meeting of the Acoustical Society of America, 7–11 November, Virtual, 2021. <https://doi.org/10.1121/10.0007561>
2. N. Hanuman, **T. Bose**, Numerical investigation of fully acoustic nondestructive testing method of delamination in glass fibre reinforced plastics, 179th Meeting of the Acoustical Society of America, 7–11 December, Virtual, 2020. <https://doi.org/10.1121/1.5147286>
3. **T. Bose**, N. Hanuman, Fully acoustic non-destructive testing (NDT) for carbon fiber reinforced plastic (CFRP) plate, SINCE 2019, Period- 4-5 December, Place-Singapore, 2019.
4. N. Hanuman, **T. Bose**, Bicoherence based study of non-linear intermodulation in delaminated CFRP plate, Conference & Exhibition of the society for NDT (NDE 2019), Period: 5-7 December, Place: Bangalore, 2019.
5. S. Roy, **T. Bose**, K. Debnath, Nonlinear Ultrasonic Wave Spectroscopy for Detecting Local Defect Resonance Frequency in Delaminated GLARE Plate, IWSHM 2019, Period- 10-12 September, Place- Stanford University, 2019.
6. N. Hanuman, **T. Bose**, Acoustic non destructive evaluation of Glass-Fibre Reinforced Plastic (GFRP) Plate, Conference & Exhibition of the society for NDT (NDE 2018), Period: 19-21 December, Place: Navi Mumbai, 2018.
7. S. Roy, **T. Bose**, Detection of local defect resonance frequencies using bicoherence analysis, Conference & Exhibition of the society for NDT (NDE 2018), Period: 19-21 December, Place: Navi Mumbai, 2018.
8. S. Roy, **T. Bose**, K. Debnath, Detection of Local Defect Resonance Frequencies for Defect Imaging: A Nonlinear Ultrasound-Based Approach, International conference in recent innovation developments in mechanical engineering (ICRIDME), Period: 8-10 November, Place- Shillong, 2018.
9. M. Vashum, S. Roy, **T. Bose**, Shear Behaviour of the Delaminated Glass Fibre Reinforced Composite Laminates, International conference in recent innovation & developments in mechanical engineering (ICRIDME), Period: 8-10 November, Place- Shillong, 2018.
10. S. Roy, **T. Bose**, K. Debnath, Analytical and numerical study of local defect resonance frequencies in fibre metal laminates, 2nd International Conference on Power, Energy and Environment: Towards Smart Technology (ICEPE), Period- 1-2 June, Place- Shillong, 2018.
11. **T. Bose**, I. C. Geraldo, K. M. Pekpe, J. P. Cassar, A. R. Mohanty, K. Paumel, Autoregressive model-based boiling detection in a Liquid Metal Fast Breeder Reactor, 9th IFAC Symposium, Period -2-4 September, Place - Paris, 2015.
12. **T. Bose**, I. C. Geraldo, K. M. Pekpe, J. P. Cassar, A. R. Mohanty, K. Paumel, Sodium boiling Detection in a LMFBR Using Autoregressive Models and SVM, IFAC World Congress 214, Period -August 2014, Place - Cape Town, South Africa, Page -1-6, 2014. <https://hal.archives-ouvertes.fr/hal-01059371/>

16. National Conferences:

1. **T. Bose**, A. R. Mohanty, Vibration analysis of a thin rectangular plate with an arbitrary oriented surface crack, 58th Congress of ISTAM, Period -18-21 December, Place -IIST Shibpur, Page -1-7, 2013.

2. S. Roy, **T. Bose**, K. Debnath, “Influence of the Delamination Geometry on the Shear Behaviour of Glass/Epoxy Composites”, National Conference on Advanced Materials, Manufacturing and Metrology (NCAMMM 2018), February 16-17, 2018, CSIR-CMERI, Durgapur, India.

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

S.No	Name of Award	Awarding Agency	Year
1	GATE (Graduate aptitude test in Engineering) fellowship	UGC (University Grants Commission), India	2008-10
2	Institute fellowship at IIT Kharagpur	MHRD	2010-14

18. Any other Information (maximum 500 words)

Author one conference paper “Detection of local defect resonance frequencies using bicoherence analysis” received best paper award at NDE 2018 at Mumbai.