Curriculum Vitae

1. Full name **:** TAPAS KUMAR NANDI

2. Date of birth **:** 20 May, 1963

3. Place of birth **:** Vill- Khagrageria, P.S.: Sabang, Dist: Paschim Medinipur, WB – 721144, INDIA

4. Mailing address **:** Cryogenic Engineering Centre, Indian Institute of Technology Kharagpur, Kharagpur, WB – 721302, INDIA

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5. Educational qualifications **:** BE (Mech.), Jalpaiguri Govt. Engg. College, West Bengal, INDIA, year: 1986

Ph.D , IIT Kharagpur, WB, INDIA , year: 1992

6. Present position **:** Assoc. Prof., Cryogenic Engineering Centre, IIT Kharagpur

7. Experience **:**

University /Organisation	**Designation**	**From**	**To**	**Total Period**
Cryogenic Engg. Centre IIT, Kharagpur	Assoc. Prof.	16.05.18	Till date	1 year +
Cryogenic Engg. Centre IIT, Kharagpur	Asstt Prof.	18.08.04	15.05.18	13 years +
Dept. Space Engg.& Rocketry Birla Institute of Technology Mesra, Ranchi	Reader	22.07.98	17.08.04	6 years (Approx)

Indian Institute of Technology, Kharagpur,WB	Visiting lecturer	27.11.96	21.07.98	20 months (Approx)
Indian Space Research Organisation, LPSC, Valiamala, Trivandrum, Kerala	Sci/Eng. -"SD"	04.09.92	22.11.96	4 years 2 months (Approx)
Indian Space Research Organisation, LPSC, Valiamala,Trivandrum, Kerala	Visiting Scientist	11.03.92	03.09.92	6 months (Approx)

8. Publications **:** Journal- 33, conference -48, workshop-3

9. Research guidance **:** Ph.D : completed -2, thesis submitted -1, ongoing-2

M. Tech : completed-19, ongoing-2

10. Projects **:** Sponsored: 9 (as PI), 3 (as co-PI), consultancy: 1

LIST OF PUBLICATIONS

REFEREED JOURNALS

International:

1. Nandi, T. K. and Sarangi, S., "Performance and Optimisation of Hydrogen Liquefaction Cycles", Int. J. Hydrogen Energy, vol-18, (1993), p. 131-139. Publ: Pergamon Press, UK, publisher: Elsevier; 5 year *Impact factor:3.659, Scopus ID: 26991*

2. Nandi, T. K. and Ramamurthi, K., "A Theoretical Model for Collapse of Vapor Locks Formed During Filling of Cryogenic Systems", Cryogenics, vol-37, (1996), p.153-158. Publisher: Elsevier; 5 year *Impact Factor : 1.119, Scopus ID: 13713*

3. Nandi, T. K., "Heat Transfer Through Cryogenic Rocket Propellant Tank Insulation During Ground Hold Conditions", Journal of Spacecraft and Rockets, AIAA, vol-38, No.3, (2001), p.360-367. Publ: AIAA, 5 year *Impact Factor : 0.82, Scopus ID:29589*

4. Nandi, T. K., "Manufacturing of herringbone-grooved journal bearing by chemical milling", J Machining and Forming Technologies, vol-1 (1/2), (2009), p.129-140. Publ: Nova Science, USA, ISSN:1947-4369

5. Dash, G. K. A., Nandi T. K. and Das, P.K., "Exergy destruction in the double inlet pulse tube cryocooler (DIPTC): A parametric study", Int. J. Energy Res, vol.33,(2009), pp.1290-1308. Publ: John Wiley and Sons, *Impact factor: 2.737, Scopus ID:26676*

6. Ratna Raju, L., Sunil Kumar, S. and Nandi, T. K., "An experimental setup for performance evaluation of perforated plate heat exchangers at cryogenic temperatures", Int. J. Adv. Materials Manufacturing and Characterization", vol-1, issue 1, (2012), pp. 133-137. Publ: GRIET (India), ISSN: 2277-3886

7. Sunil Kumar S. and Nandi T. K., "Fabrication of perforated plate heat exchangers", Journal of machining and forming technologies, vol-5, issue 1-2,(2013), pp.63-74, Publ: Nova Science, USA

8. Ratna Raju, L. and Nandi, T. K., "Design optimization of perforated heat exchangers using genetic algorithm", Int. J. Adv. Materials Manufacturing and Characterization, vol-3, issue 1, (2013), pp. 89-93. Publ: GRIET (India), ISSN: 2277-3886

9. Sunil Kumar S., Ratna Raju L. and Nandi T. K., "Thermal performance of perforated plate matrix heat exchangers with effects from outer wall and flow channel geometry", Cryogenics, vol-72, (2015), pp.153-160. Publ: Elsevier, 5 year Impact Factor : 1.119, Scopus ID: 13713

10. Sunil Kumar, S. and Nandi, T.K., "Electroless nickel plating for fabrication of perforated plate heat exchanger", International Journal of Innovative Research in Science, Engineering and Technology, vol-4, special issue 12, (2015), pp.35-40. Publ: Ess and Ess Research, Chennai, India, *Impact factor: 6.209(SJIF*), *ISSN (2347-6710)*

11. Somani A., Nandi T. K., Pal Samir K., Majumder A. K., "Pre-treatment of Rocks Prior to Comminution—a Critical Review of Present Practices", Int J Mining Science and Technology, vol-27, pp.339-348, (2017), publisher: Elsevier, *Impact Factor:* 1.98*, Scopus ID: 21100201945*

12. Ratna Raju L., and Nandi, T.K., "Effective NTU of a counterflow heat exchanger with unbalanced flow and longitudinal heat conduction through fluid separating and outer walls", Applied Thermal Engineering, vol-112, pp. 1172-1177, (2017), Publ: Elsevier, 5 years *impact factor : 3.269,Scopus ID:13688*

13. Sunil Kumar S. and Nandi T. K., "Issues on the Testing of small Cryogenic Recuperators and Experimental Studies on Perforated Plate Heat Exchangers", Heat Transfer Engineering, vol-39, No. 9, (2018), pp. 794-805, Publ: Tylor and Francis, *Impact factor: 1.46, Scopus ID: 13002*

14. Ratna Raju L., Sunil Kumar S. and Nandi, T. K., "Effects of geometrical parameters on thermos-hydraulic characteristics of perforated plates", Int. J. Thermal Sciences, vol. 124, pp. 13-22, (2018), Pub: Elsevier, 5 yrs *Impact factor:4.041*

15. Bisai R., Goel S., Hatwal, A., Pal S.K., Majumder, A. and Nandi T. K., "Effect of cryogenic pre-treatment on breakage characteristics of rocks", J of Mining Science, vol. 54, pp. 202-211, (2018), Pub: Springer

16. Hazra S. K., Ghosh S. and Nandi T. K., "Photo thermal conversion characteristics of carbon black-ethylene glycol nanofluids for applications in direct absorption solar collectors" Applied Thermal Engineering, vol. 163, 2019, Pub: Elsevier

17. Hazra S. K., Michael M. and Nandi T. K., "Investigations on optical and photo-thermal conversion characteristics of BN-EG and BN/CB-EG hybrid nanofluids for applications in direct absorption solar collectors", Solar Energy Materials & Solar Cells 230 (2021) 111245. DOI: https://doi.org/10.1016/j.solmat.2021.111245

National:

1. Nandi, T. K. and Ramamurthi, K., "Theoretical Prediction of Thermal Stratification of Cryogenic Liquids in Insulated Containers", Indian Journal of Cryogenics, vol-18, (1994)

2. Mahadev, W. S., Mishra, D., Nandi, T. K., and Chatterjee, A. K., "Development of a LOX/GH_2 Propulsion System", Indian Journal of Cryogenics, vol-28, No.1, (2003), p.17-24

3. Chatterjee, A. K. and Nandi, T. K., "Cryogenic Propulsion in Space Missions", Indian Journal of Cryogenics, vol-29, No.4, (2004), p.144-152

4. Nandi, T. K., "Development of Grooved Journal Bearings for Cryogenic Turbo-Expander Rotors", Indian Journal of Cryogenics, special issue, vol-2, (2005), p.6-11

5. Omprakash, A. M. and Nandi T. K., "A system for the measurement of mechanically actuated switching intervals", J. Instrum. Soc. India, vol-37 (4), (2007), p.272-276

6. Dasgupta, S. S. and Nandi, T. K., "Development of a cryogenic turbo-expander using herringbone-grooved journal bearings", Indian Journal of Cryogenics, vol- 32 (1-4), (2007), p.125-130

7. Vinod Kumar V., Dutta, M. K. and Nandi, T. K., "Development of a test setup for ineffectiveness measurement of cryogenic regenerators", Indian Journal of Cryogenics, vol- 32 (1-4), (2007), p.136-141

8. Choukekar, K. D., Nandi**,** T. K. George**,** Paul P**,** and Suresh**,** M. S.**, "**Hydrostatic journal bearings for cryogenic rocket engine turbopumps: a review on the developments", Aerospace Journal of Institution of Engineers (I), vol-90, November, (2009), pp 3-8. SJR: 0.107, SNIP (2013): 0.367, Scopus index ID: 29076

9. Sunil Kumar, S. and Nandi, T. K., "A numerical model for prediction of effective thermal conductivity of perforated plates in matrix heat exchangers", Ind. J. Cryogenics, vol-34, (2009), pp.202-207

10. Choukekar, K. D., Nandi**,** T. K. George**,** Paul P**,** and Suresh**,** M. S., "Design of LOX/LH_2 cooled hydrostatic journal bearings for cryogenic rocket engine turbopumps", Ind. J. Cryogenics, vol-35, (2010), pp.424-429

11. Sunil Kumar, S. and Nandi, T. K., "Heat transfer and flow friction studies on perforated plates using Fluent^{TM}", Ind. J. Cryogenics, vol-37, issue 1-4, (2012), pp.73-78

12. Kumar Mukesh and Nandi, T. K., "Static and dynamic behavior of cryogenically cooled hydrostatic journal bearings for space applications", Ind. J. Cryogenics, vol-37, issue 1-4, (2012), pp.116-121

13. Sunil Kumar S. and Nandi T. K., "Experimental studies on Cu-SS diffusion bonded perforated plate heat exchangers", Indian Journal of Cryogenics, vol-39, (2014), pp.70-75

14. Yadav, V.K., Yadav, K.V, Gupta, S.K. and Nandi, T.K., "Design analysis and development of a thermoacoustic engine", Indian Journal of Cryogenics, vol-43, (2018), pp.76-82

15. S. Behal, P.S. Virdi, M. Kumar, A.S. Ramasubramanian, T.K. Nandi, "Numerical prediction of nozzle behavior of the CE-20 engine for developing a nozzle protection system (NPS) for testing at sea level, Indian Journal of Cryogenics, vol-46, (2021), pp.73-78

16. Mallappa, S. Ramesh, D.G. Chandra, A. Rajan, T.K. Nandi, "Analysis of rocket propulsion test data using multi-sensor data fusion technique, Indian Journal of Cryogenics, vol-46, (2021), pp.108-113

CONFERENCE PROCEEDINGS

International:

1. Nandi, T. K. and Sarangi, S., "Design of a Small Hydrogen Liquefier based on Precooled Linde-Hampson Cycle", Proc. of the 2nd Int. Cryogenics Symp., Calcutta, (December 1988), p. 366-373

2. Singh, N. K., Mishra, D., Nandi, T. K. and Chatterjee A. K., "Manufacturing of Herringbone-grooved Journal Bearing by Chemical Milling", Proc. of the Int. Conf. on Manufacturing, ICM-2002, Dhaka, (August 9-11, 2002), p. 534-542

3. Sunil Kumar S., and Nandi T. K., "Effective thermal conductivity of perforated plates for design of matrix heat exchangers", Proc. of the International Conference on Advances in Mechanical Engineering (ICAME – 2008), SVNIT, Surat, (December 15-17, 2008), P. 134-140

4. Sunil Kumar S., and Nandi T. K., "Three dimensional modeling of matrix heat exchangers", presented in Asian Conference on Applied Supperconductivity and Cryogneics (ACASC2009), Cryogenic Association of Japan, Matuse, Japan, 6-8 Dec, 2009

5. S. Sunil Kumar and Nandi T. K., "Electroless nickel plating for fabrication of perforated plate heat exchanger", Presented in 2nd International Conference on Emerging Trends in Mechanical Engineering (ICETME-2015), 3-5 September, 2015, TocH Institute of Science and Technology, Ernakulum, India.

6. Ratna Raju, L., Sunil Kumar, S. and Nandi, T. K., "An experimental setup for performance evaluation of perforated plate heat exchangers at cryogenic temperatures", presented at the Int. Conf. on Materials Processing and Characterization (ICMPC-2012), Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, India (March 8-10, 2012)

7. Ratna Raju, L. and Nandi, T. K., "Design optimization of perforated heat exchangers using genetic algorithm", presented at the Int. Conf. on Materials Processing and Characterization (ICMPC-2013), Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, India (March 14-15, 2013)

8. L. Ratna Raju, Sunil Kumar S., K. Chowdhury and T. K. Nandi, "Heat transfer and flow friction correlations for perforated plate matrix heat exchangers" Presented in 26th International Cryogenic Engineering Conference(ICEC2016), March 7-11, IOP Conf. Ser.: Mater. Sci. Eng. 171 012085

9. L. Ratna Raju and T. K. Nandi, "Numerical modelling of perforated plate matrix heat exchangers with complex flow channel geometries and large number of plates", presented in International Conference on Computational Methods, Simulation and Optimization (ICCMSO-2018), at Asian Institute of Technology, Bangkok, Thailand, June 22-24, 2018.

10. L. Ratna Raju and T. K. Nandi, "Design optimization of perforated plate matrix heat exchangers for cryogenic applications using Teaching Learning Based Optimization method", presented in 27th International Cryogenic Engineering Conference 2018 and International Cryogenic Materials Conference (ICEC27-ICMC 2018), at University of Oxford Examination Schools, Oxford, UK, September 3-7, 2018.
IOP Conf. Ser.: Mater. Sci. Eng. **502** 012053, pp.1-5

11. S. K. Gupta, P. Ghosh and T. K. Nandi, "Theoretical and CFD investigations on a 200 Hz thermoacoustic heat engine using pin array stack for operations in a pulse tube cryocooler", presented in 27th International Cryogenic Engineering Conference 2018 and International Cryogenic Materials Conference (ICEC27-ICMC 2018), at University of Oxford Examination Schools, Oxford, UK, September 3-7, 2018.
2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **502** 012025,pp.

12. S. Zafar, A. Gupta, T. K. Nandi, "Design and construction of a pressure wave cryogenic refrigerator" presented in The 15th Cryogenics 2019 IIR International Conference & Exhibition, Prague, Czech Republic, April 7-11, 2019. Publ: ICCEX s.r.o., Prague

13. S. Behal and T. K. Nandi, "Numerical prediction of side loads in cryogenic rocket nozzle at sea level operation", presented in joint 23rd Cryogenic Engineering Conference and International Cryogenic Materials Conference, CEC/ICMC 21, July 19-23, 2021 (virtual conference).

14. L. R. Raju and T. K. Nandi, "Thermal modelling of high-NTU perforated plate matrix heat exchangers With a large number of plates and numerous flow channels", presented in International conference on heat transfer, fluid mechanics (ATE-HEFAT2021), 25-28 July 2021 (virtual conference).

National:

1. Nandi, T. K. and Sarangi, S., "Computer Aided Design of Large Cryogenic Storage Vessels", Presented at the Eleventh National Symposium on Cryogenics (ENSC-90), IIT. Kharagpur, (Jan-1991)

2. Nandi, T. K and Ramamurthi, K., "Theoretical Prediction of Thermal Stratification of Cryogenic Liquids in Insulated Containers", Presented at the Thirteen National Symposium on Cryogenics, Kolhapur, (1994)

5. Nandi, T. K., "Thermal Protection System for the Cryogenic Rocket Stages", Presented at the Sixteenth National Symposium on Cryogenics and Workshop on Industrial Cryogenics (SNSC-97&WIC), IIT, Kharagpur, (December 1997)

6. Nandi, T. K. and Chatterjee, A. K., "Transient Heat Transfer Through Cryogenic Rocket Propellant Tanks – A Numerical Approach", presented in 51st AGM and Seminar on Advances in Aerospace Technologies (SAAT-2000), AeSI, Hyderabad, (January 21-22, 2000)

5. K, Neeraj, Nandi, T. K. and Chatterjee, A. K., "Design and Development of Herringbone-Grooved Journal Bearings for Cryogenic Turbo-Expander Rotors", Fifteenth National Convention of Aerospace Engineers and National Seminar on Aerospace and Rocket Technologies: Challenges Ahead (AeRoTeCh-2001), BIT, Ranchi, (February 23-24, 2001), p. v.3.1-v.3.15

6. Mahadev, W. S., Mishra, D., Nandi, T. K., and Chatterjee, A. K., "Development of a LOX/GH_2 Propulsion System", presented in Nineteenth National Symposium on Cryogenics, Jadavpur University, Kolkata, (March 24-26, 2003)

7. Debdas, S., Nandi, T. K. and Chatterjee, A. K., "Development of Herringbone-Grooved Journal Bearing for Cryogenic Applications", Proc. of the 17th National Convention of Aerospace Engineers and National Seminar on Indian Aerospace Vehicles: Technological Challenges, BIT, Ranchi, (November 3-5,2003)

8. Nandi, T. K. and Chatterjee, A. K., "Cryogenic Applications in Space Missions", presented in National Seminar and Conference on Cryogenics and its Frontier

Applications, B.E. College, Howrah, (March 25 – 27, 2004)

9. Nandi, T. K., "Development of Grooved Journal Bearings for Cryogenic Turbo-Expander Rotors", presented in Twentieth National Symposium on Cryogenics, S.V. NIT, Surat, (February 24-26, 2005)

10. Nandi, T. K., " Development of a Cryogenic Expansion Device using Herringbone-Grooved Journal bearings", presented in Twenty-first National Symposium on Cryogenics (TFNSC), NPL, New Delhi (February 22-24, 2006)

11. Vinod Kumar, V., Dutta, M. K. and Nandi, T. K., "Development of a Test Setup for ineffectiveness Measurement of Cryogenic Regenerators", presented in Twenty-first National Symposium on Cryogenics (TFNSC), NPL, New Delhi (February 22-24, 2006)

12. Nandi, T. K., "Theoretical Prediction of Wall Temperature Distribution in a Thermally Stable Cryogenic Container", presented in 34th National Conference on Fluid Mechanics and Fluid Power, BIT, Ranchi (December 10-12, 2007) p.606-614

13. Khade N. S. and Nandi, T. K., "Ineffectiveness of Regenerative Heat Exchanger: Definitions and Experimental Setup for Measurement", presented in 34th National Conference on Fluid Mechanics and Fluid Power, BIT, Ranchi (December 10-12, 2007) p. 557-565

14. Choukekar, K. D., Nandi, T. K., Geroge, P. P. and Suresh, M. S., "Hydrostatic Journal Bearing for Cryogenic Rocket Engine Turbopumps: A Review on the Developments", presented in 22nd National Convention of Aerospace Engineers and National Seminar on Present Status and Technological Challenges of Indian Aerospace Programme, BIT, Mesra, Ranchi (November 27-29, 2008)

15. Sunil Kumar S., and Nandi T. K., "A numerical model for prediction of effective thermal conductivity of perforated plates in matrix heat exchangers", presented in 22nd National Symposium on Cryogenics, IISc, Bangalore (December 4-6, 2008)

16. Sunil Kumar S., and Nandi T. K., "Fabrication of Cu-SS matrix heat exchangers by diffusion bonding-A review", 9th National Conference on Technological Trends, College of Engineering, Thiruvanthapuram, (21-22 Nov, 2008)

17. Sunil Kumar S. and Nandi T. K., "Heat Transfer and Flow Friction Studies on Perforated Plates Using Fluent ™ ", Presented in 23rd National Symposium on Cryogenics (NSC-23), NIT, Rourkela, October 28-30, 2010

18. Mukesh Kumar and Nandi T. K., "Static and Dynamic Behavior of Cryogenically Cooled Hydrostatic Journal Bearings for Space Applications", Presented in 23rd National Symposium on Cryogenics (NSC-23), NIT, Rourkela, October 28-30, 2010

19. Sunil Kumar S. and Nandi T. K., "Fabrication of perforated plate heat exchangers", presented in 25th National Convention of Aerospace Engineers and National Seminar

on Indian Aerospace Programme: Technological challenges beyond 2020, BIT, Mesra, Ranchi (November 4-5, 2011)

20. Jena J. R. and Nandi T. K., "Wave expanders for production of refrigeration: A review on the recent developments", presented in 25th National Convention of Aerospace Engineers and National Seminar on Indian Aerospace Programme: Technological challenges beyond 2020, BIT, Mesra, Ranchi (November 4-5, 2011)

21. Sunil Kumar S. and Nandi T. K., "Experimental studies on Cu-SS diffusion bonded perforated plate heat exchangers", Presented in 24th National Symposium on Cryogenics (NSC-24), IPR, Gandhinagar, India (January 22-24, 2013)

22. Ratna Raju, L., and Nandi T. K., "Design optimization of perforated plate heat exchangers using Taguchi method", Presented in 24th National Symposium on Cryogenics (NSC-24), IPR, Gandhinagar, India (January 22-24, 2013)

23. S. Sunil Kumar and Nandi T. K., "Issues on the testing of a recuperator at cryogenic temperatures and experimental studies on cu-ss perforated plate heat exchangers", proceedings of the 22th National and 11th International ISHMT-ASME Heat and Mass Transfer Conference, December 28-31, 2013, IIT Kharagpur, India

24. S. Sunil Kumar and Nandi T. K., "Fabrication and acceptance testing of perforated plate heat exchangers**",** Proceedings of the 25th National Symposium on Cryogenics (NSC-25), Hyderabad, 8-10 Dec, 2014

25. Ratna Raju, L. and Nandi, T. K., "Effect of outer wall that separates fluids from the ambient on the performance of perforated plate heat exchanger", Proceedings of the 25th National Symposium on Cryogenics (NSC-25), Hyderabad, 8-10 Dec, 2014

26. Gupta, A. and Nandi, T. K., "Numerical investigation on a pressure wave refrigerator", Proceedings of the 25th National Symposium on Cryogenics (NSC-25), Hyderabad, 8-10 Dec, 2014

27. Yadav, V.K., Gupta, S.K., Karri, V.Y. and Nandi, T.K., "Design analysis and development of a Thermoacoustic Engine", 25th National Symposium on Cryogenics(NSCS-26), Kolkata, 22-24 Feb, 2017

28. Gupta, S.K., Karri, V.Y., Yadav, V.K. and Nandi, T.K., "Application of Thermoacoustic devices in cryogenic systems: A review since the year 2000", 25th National Symposium on Cryogenics(NSCS-26), Kolkata, 22-24 Feb, 2017

29. Karri, V.Y., Gupta, S.K., Yadav, V.K. and Nandi, T.K., "Design and development of a high speed Rotary valve for operation in a pressure wave refrigerator", Proceedings of 25th National Symposium on Cryogenics(NSCS-26), Kolkata, 22-24 Feb, 2017

30. Praveen Kumar, S. and Nandi, T.K., "Pressure wave refrigerator using shock tube principle – A review on the developments", presented in 32end National Convention of Aerospace Engineers (NCAE 2018), Oct. 27-28, 2018 BIT Mesra, Ranchi, India. PP. 57-64.

31. Gupta, S.K., Ghosh, P. and Nandi, T.K., " Performance comparison of a thermoacoustic engine having different stack geometry using CFD simulation", presented in 27th National Symposium on Cryogenics and Superconductivity", January 16-18, 2019, IIT Bombay, India

32. Raju., L.R. and Nandi, T.K., "Design of multichannel perforated plate matrix heat exchangers for cooling of high pressure and high flow rate helium gas using cold hydrogen vapour", presented in 27th National Symposium on Cryogenics and Superconductivity", January 16-18, 2019, IIT Bombay, India

33. Mallappa, Ramesh, S., Chandra, D.G., Rajan, A. and Nandi, T. K., "Analysis of rocket propulsion test data using multisensor data fusion technique", presented in national Conference on Cryogenics for Space (NCCS 2019), December 12-14, 2019, LPSC, ISRO, Trivandrum, India

34. Behal, S., Virdi, S. P., Kumar M., Ramasubramanian, A. S. and Nandi, T. K., "Numerical prediction of nozzle behavior for the CE-20 engine for developing a nozzle protection system (NPS) for testing at sea level", presented in national Conference on Cryogenics for Space (NCCS 2019), December 12-14, 2019, LPSC, ISRO, Trivandrum, India

Workshop

1. Venkatarathnam, G., Nandi, T. K. and Sarangi, S., "Matrix Heat Exchangers and their Application In Liquefaction of Hydrogen", Presented at Hydrogen Energy Workshop, Jaipur, (August 1989)

2. Nandi, T. K. and Chatterjee, A. K., "Liquid Hydrogen and Cryogenic Rocket Propulsion", presented in All India Workshop on Cryogenic Technology in Mechanical Engineering (CRYO-TECH-2000), The Institution of Engineers (India), Calcutta, (June 17, 2000)

3. Nandi, T. K., "Cooling of superconducting magnets – an overview", presented in the National Workshop on Helium Cryogenics, NIT, Rourkela, (July 10-11, 2008).

Technical Reports (Internal Publications)

1. Nandi, T. K., and Sarangi, S., "Safety Problems in Production, Storage and Transfer of Liquid Hydrogen", Publ. No. CrE-PEDL-88-1, Process Equipment and Design Laboratory, IIT, Kharagpur, (1988)

2. Nandi, T. K., Dutta, A. K., Dey, S. R. and Sarangi, S., "Design and Construction of a Small Hydrogen Liquefier", Publ. No. CrE-PEDL-90-1, Process Equipment and Design Laboratory, IIT, Kharagpur, (1990)

3. Nandi, T. K., "Thermal Protection System for Cryogenic Stage, Report No. LPSC/PRS/TR/015/94, Propulsion Research and Studies Group, LPSC, ISRO, Valiamala, Trivandrum, (1994)

4. Nandi, T. K. "Design of a Cryogenic Storage Tank for Studying Foam Insulation", Report No.LPSC/PRS/TR/020/94, Propulsion Research and Studies Group, LPSC, ISRO, Valiamala, Trivandrum, (1994)

5. Nandi, T. K., "An Experimental Set-up for Studying Foam Insulation and Thermal Stratification on Storage of Cryogenic Liquids", Report No. LPSC/PRS/TR/021/94, Propulsion Research and Studies Group, LPSC, ISRO, Valiamala, Trivandrum, (1994)

6. Nandi, T. K, "Chill Down Analysis for CS LOX Tank", Report No.LPSC/PRS/TR/025/95, Propulsion Research and Studies Group, LPSC, ISRO, Valiamala, Trivandrum, (1995)

7. Nandi, T. K., "Mission Based Optimisation of Thermal Protection System for Cryo-Stage of GSLV, Report No.: LPSC/PRS/TR/028/95, Propulsion Research and Studies Group, LPSC, ISRO, Valiamala, Trivandrum, (1995)

8. Vijayan, O. and Nandi, T. K., "Additional Helium Requirement for Single Burn Mission of the Cryogenic Stage", Report No.: LPSC/CUSP/TR/198/95, Launch Vehicle Propulsion Systems Group, LPSC, ISRO, Valiamala, Trivandrum, (1995)

9. Vijayan, O., Nandi, T. K., Harikumar, T. R. and Devadoss, A. J., "Design of Insulation System for the Stage Systems", Report No.: LPSC/CUSP/TR/243/96, Liquid Propulsion Stages Group, LPSC, ISRO, Valiamala, Trivandrum, (1996)

10. Nandi, T. K., "Chilling of LH2 Feed Line and Engine Assembly without Using Vented Hydrogen Vapour", Report No.: LPSC/PRS/TR/03/96, Propulsion Research and Studies Group, LPSC, ISRO, Valiamala, Trivandrum, (1996)

Invited talks / guest lecture:

1. Delivered an invited talk on "Cryogenics and Rocket Propulsion" at the Regional Science Congress of Navodaya Vidyalaya Samiti (Regional Office, Patna), Ministry of MHRD, Govt. of India, held at Jawahar Novodaya Vidyalaya, Paschim Medinipur, during the period from 15/11/13 to 20/11/2013

2. Delivered an invited talk on "Cryogenics for space applications" at the Regional Science Congress of Navodaya Vidyalaya Samiti (Regional Office, Patna), Ministry of MHRD, Govt. of India, held at Jawahar Novodaya Vidyalaya, Kalyani, during the period from 26/11/14 to 30/11/2014

3. Delivered an invited lecture on “Matrix heat exchangers for cryogenic applications” in the “Research Week” organized by Gujarat Technological University, Ahmedabad on 18/03/2015

4. Delivered a talk (three hours duration) on “Heat Exchangers for Cryogenic Applications” before the UG and PG students in Government College of Engineering, Trivandrum on 18/12/2015.

5. Delivered an invited talk on “Cryogenics for space applications”, at the National Workshop on Cryogenics at Centre for Rural and Cryogenic Technologies, Jadavpur University, Kolkata on 28/3/2016.

6. Delivered an invited talks on “Heat exchangers for cryogenic applications” in two days workshop on “Exploring the research potential and capabilities in the field of thermal sciences” organized by Government Engineering College, Vidyanagar, Bhavnagar, Gujrat, during the period from 22 – 23 August, 2016.

7. Delivered an invited talks on “Vacuum as Thermal Insulation” in two days workshop on “Exploring the research potential and capabilities in the field of thermal sciences” organized by Government Engineering College, Vidyanagar, Bhavnagar, Gujrat, during the period from 22 – 23 August, 2016.

8. Delivered an invited talks on “Cryogenics for Space Applications” in two days workshop on “Exploring the research potential and capabilities in the field of thermal sciences” organized by Government Engineering College, Vidyanagar, Bhavnagar, Gujrat, during the period from 22 – 23 August, 2016.

9. Delivered an invited talk on “Recent advances in Indian space programes” at the Regional Science Congress of Navodaya Vidyalaya Samiti (Regional Office, Patna), Ministry of MHRD, Govt. of India, held at Jawahar Novodaya Vidyalaya, Kalyani, during the period from 14/11/16 to 19/11/2016

10. Delivered an invited talk on “Introduction to cryogenics and its applications” at the Regional Science Congress of Navodaya Vidyalaya Samiti (Regional Office, Patna), Ministry of MHRD, Govt. of India, held at Jawahar Novodaya Vidyalaya, Kalyani, during the period from 14/11/17 to 18/11/2017

11. Delivered an invited talk on “Cryogenic rocket propulsion – the need and challenges”, presented in the National Workshop on current trends in cryogenics (CRYO-2018), Centre for rural and Cryogenic Technologies, Jadavpur University, March 13, 2018.

12. Delivered a guest lecture on “Matrix heat exchangers for cryogenic applications” at NIT Calicut on June 27, 2018

13. Delivered an Invited talk on “Cryogenics for Rocket Propulsion: the need and challenges” at Jaypee Institute of Information Technology, Noida, UP, India, in “Two days workshop on Cryogenics and Superconductivity (WOCS-2019) on 27-09-2019, duration 2 hours.