CURRICULUM VITAE

1. Personal Details

NAME : Dr. T. S. DATTA

Present Designation : **Visiting Professor**

Past Affiliation/ Designation : Scientist- H, Head, Cryogenic & Applied Superconductivity Group, Inter- University Accelerator Centre. New Delhi

Date of Birth : **June 21, 1959**,
Place of Birth : Painta, Burdwan. West Bengal

Present Address with Contact Details :

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2 . Academic Qualification :

M.Sc. (Nuclear Physics) : 1982. (First Class) IIT. Kharagpur
M.Tech. (Cryogenic Engineering) : 1984 (First Class) . IIT. Kharagpur
Ph.D : JNU. New Delhi

3.1 Work Experience:

July, 2019- till date : Visiting Professor, IIT. Kharagpur
2008 - June 2019 : Scientist- H (Highest position at IUAC)
2003 - 2008 ; Scientist- G
1998 – 2003 : Scientist- F , Inter – University Accelerator Centre (IUAC), Delhi
1984 – 1998 : Department of Atomic Energy (IGCAR. Kalpakkam.) as Scientific Officer (C, D, E)
1984 (2 months) : Engineer (Management Trainee) for Asiatic Oxygen Ltd. at Raipur.

Subject Specialization :

1. Helium Refrigerator Process Cycle, Helium Gas separation and Purification by Membrane/ Cryogenic Adsorption Process, 2 K system
2. Cryogenics and Superconductivity for Particle Accelerator, Superconducting Cavity
3. Superconducting Magnet (Current lead, Magnet, Quench Studies) & MRI

4. Studies on Cryogenic Insulation, Thermo-siphon with Liquid Nitrogen, A
5. Heat Transfer at low Temperature, Thermal Contact resistance, Angular Radiation
8. High Temperature Superconductor for Power Application

Managerial: Project Management (Planning, Procurement, Finance, Execution), Documentation, Industrial contract management and Technology Commercialization, in the field of Cryogenics and Superconductivity. Technical Administration and International Interaction is my Quality. Management of International Collaborations in Science and Technology - Bilateral and Global like ACFA, ACASC etc.

3.2 Brief Past Academic Activity

A. IGCAR. Kalpakkam, (1984- 1998)

1. Started my Career with the development project " **Helium Recovery from Monazite Sand and Purification". Pilot plant design, development, installation and commissioning of purification plant of capacity 20 NM^3/ hr at Indian Rare Earths Limited. Alwaye. The pilot project was Commissioned by Dr. P. K Iyengar, Chairman DAE in 1990**

2. Associated with a National Multi institute project **" Development of Cold Box for Helium Liquefier with capacity 10 litres/ hr" funded by Department Of Science & Technology (DST) and under the Chair of Prof R Srinivasan. (1994- 1998)**
3. In- charge of cryo facility consists of CTI-1400 helium liquefier and Sterling Liquid Nitrogen Plant to cater the requirement of users from Indira Gandhi Centre for Atomic Research and Madras Atomic Power Plant

B. Inter- University Accelerator Centre (IUAC) . New Delhi (1989 – 2019)

1. Planning, process calculation, Procurement, Installation, Co ordination and Commissioning of **total Cryo system** required for Superconducting Linac programme. That Includes **Linde 1kW class Helium Refrigerator, Closed loop LN2 Plant, Helium Gas Recovery Management**

2. Design, Development of Beam line **Cryomodules, test cryomodules** to house the Bulk Niobium Cavities at 4. 2 K. This size of Cryomodules was first developed in India with close interaction between Indian Industries

3. Design (Thermal, Mechanical) & Development of Complex Network of **liquid Helium Transfer line with Valve boxes** to Transfer liquid from Source to different Location in beam Hall. This type of large line with Valve boxes was developed first time in India with the help of Indian **Industry**

4. Cryogenic Data Acquisition and Control System for LINAC

5. Multi Channel **Cryogenic Temperature Monitor** and Liquid Level Meter
6. Development of **Helium Gas Purifier** (Import Substitution)
7. Development of **Liquid Nitrogen Driven Prime Mover**

C. External Projects (Funded by other Agency) Executed as Principal Investigator

1. Experimental & Performance Analysis of **Alternative Cryogenic Insulation**: DST under Indo-Poland Collaboration with Wroclaw University of Technology; 2005 :
2. Feasibility Study to **Purify Helium Gas by Membrane Technique** : BRNS (2008) :
3. Development of **6 Tesla Cryo Free Superconducting Magnet** : DST ; 2007
4. Development of **Cryocooler based Variable Temperature Insert (VTI)** for Cryo Free Magnet : DST (2012)
5. Development of **Table Top Liquid Nitrogen Plant** : Funded by BRNS (2012) :
6. Development of **Ever-cooled Superconducting Quadrupole Magnet for** HYRA project
7. Development of High Homogeneity SC MRI Magnet with SAMEER under the Ministry of Communication and Information Technology is under progress : 2015
8. AC Characterization of 2nd Generation **HTS Based Superconducting Fault Current Limiter** : Funded by Central Power Research Institute (CPRI, Bangalore) : 2016 :

4. International Collaboration and Visits :

1999 : Asian Accelerator School as Student
2002 : Invited at LHC, CERN and attended ICEC 19 at Grenoble. France
2004 : Invited at Michigan State University. USA
2005 : Visited Wroclaw University of Technology. Poland
2007 : Chair and Invited talk at ACASC 2007 at Xian,China
2007 : Technical Collaboration Meeting at WUT. Poland
2010 : Invited at KEK,Tsukuba and Sumitomo Industry
2010 : Invited at International Industrial Gas Summit at Guangzhou, China
2010 : Visited Linde KryoTechnique, Switzerland for Design Review Meeting
2011. Visit to Advanced Scientific Equipment, UK and visit to Light Source at Ratherford Appleton Laboratory, UK
2011 : Attended 18 th ACFA meeting as Secretary, ACFA at SINP, Shanghai
2012 : Attended ICEC 24-ICMC 201 at Fukuoka Japan
2013 : Invited by IEE/ TIPC, Chinese Academy of Science
2013 : Invited to 20 th ACFA Meeting at Budker Institute of Nuclear Physics , Novosibirsk
2013 : Invited to ACASC 2013 at Turkey to chair a session and to deliver an Invited talk
2014 : Invited to attend 21st. ACFA meeting at Melbourne University, Australia
2014 : Invited to chair a session of ICEC-25-ICMC2016 at University of Twente, The Netherlands (July, 2014) and to attend Editorials board (Cryogenics) meeting
2015 : ACFA Meeting at Dongguan , China & AFAD 2016 workshop at NSRRC, Taiwan
2015 : CEC Conference at Tuscon, USA and ICEC Committee Meeting
2015 : Visiting fellow for two months at KEK to work on thermodynamic system
2016 : ACFA Meeting at Kyoto, Japan and AFAD workshop (Invited talk & Chair a session)
2016 : Invited Lecture " Applied Superconductivity and Cryogenics In India: present and Future Prospect by Cryogenic & Superconducting Society of Japan " at Kanazawa
2017 : Invited at Lanzhou, China to give Tutorials cryogenics and Cryomodule at 18 th Superconducting RF Conference at Lanzhou, China in July 2017
2017 : Invited to deliver plenary lectures on " Cryogenics and Superconductivity for High

Energy Physics" at ASSCA2017 at KEK, Japan in Dec 2017
2018: Invited for plenary talk at ICCR 2018, China and VACREE, Hefai
2018 : Invited to deliver Tutorial Lectures at Cryo- Ops 2018 at IHEP, Beijing
2018 : Invited to deliver lectures at ASSCA 2018 at IHEP, China

5. International & National Recognition/ Member :

1. President, Indian Cryogenics Council (ICC) from April 2016
2. Secretary (Administration) ICC (2011-2016), Secretary (Technical), 2006-2010
3. Secretary (2011-2012), Asian Committee for Future Accelerator (ACFA), Vice Secretary (ACFA) : 2009- 2010.
4. Member of International Advisory Editors board of the Elsevier journal " Cryogenics" (2013- till date)
5. Chair, working Group" Cryogenics and Superconductivity for Accelerator" Under ACFA
6. Member of International Committee for ACASC (Asian Conference on Applied Superconductivity & Cryogenics). ACASC 2007(China) , ACASC 2009(Japan), ACASC 2013 (Turkey), ACASC 2015 (China)
7. Editor, IOP Publication (Volume 171, 2017)
8. Editor & Executive Coordinator of Journal " Indian Journal of Cryogenics" from 2006
9. Expert External Member / Reviewer for ITER Project / BRNS Project / Power application project
10. Member, International Advisory Committee of 1st Asian ICMC- CSSJ50
11. Chair, National Organising Committee " 26 th National Conference on Cryogenics & Superconductivity (NSCS 26) " in 2017 (VECC. Kolkata),
12. Member, National Organizing Committee of National Conference on Cryogenics : 2014 (Hyderabad University) , 2013 (IPR, Gandhinagar) , 2010 (NIT, Rourkela), 2008 (IISc, Bangalore) , 2006 (NPL, Delhi)
13. Member, Scientific Programme Committee of Cryo Ops 2014 (U.K) Cryo Ops 2016 (USA), Cryo- ops 2018 (Beijing)
14. Chair, International Programme Committee " Asian School on Superconductivity and Cryogenics for Accelerator Technology" KEK Japan (2017), ASSCA (2018), China, ASSCA (2020), Korea
15. Chair, National Organizing Committee (NSCS27), IIT Mumbai,2019
16. Member, Advisory Committee NCCS 2019 at ISRO, Trivandrum
17. Chairman , Purchase Committee of IUAC (2006- 2012)
18. Member, Committee for Academic Affairs [2010-2015, 2018- 19] and Standing Committee for Administration [2011- 2015] of IUAC
19. Life Member, Indian Society for Particle Accelerator (ISPA)

6. Awards

1. Elected Fellow of Indian Cryogenics Council (2014)
2. Best Paper Award at IVSNS 2005

3. Elected as Asian Topic Speaker from India in 1 st Asian ICMC in Japan
4. Best paper award in National Symposium on Cryogenics (NSC23) in 2010
5. Best Paper Award in National Symposium on Cryogenics & Superconductivity (NSCS 26)
6. Elected as Member , International Advisory Board for the Elsevier Published Journal : " Cryogenics " since 2013
7. Awarded Visiting Fellowship at KEK, Japan.
8. Best Paper award in NSCS27, IIT Mumbai, 2019

7. Organizing of National & International Conference/ School as Chairman/ Convener

1. **Chairman, Organizing Committee " 26 th International Cryogenic Engineering Conference on Conference - International Cryogenic Material Conference 2016 " (ICEC 26- ICMC 2016), March 2016, Delhi**
2. **Chairman, International Organizing Committee for " Asian School on Superconductivity & Cryogenics for Accelerator" at KEK, Japan**
3. Convener of **" Asian Conference on Applied Superconductivity & Cryogenics (ACASC 2011)** held in New Delhi during November 16- 18, 2011.
4. Convener, Indo- US School on Cryogenics, Superconductivity, New Delhi: 2007
5. Convener, Workshop on Cryogenic Science & Technology in India (2006)
6. Convener, School on Cryogenics at Delhi in collaboration with CERN, Switzerland: 2002
7. Interactive workshop on Cryogenics – 1999. Delhi

8. Recent Plenary/ Invited Talk

1. Plenary Talk at CABLE TECH 2019, CPRI, Bangalore
2. Plenary Talk on Cryogenics & Superconductivity for MRI at NSCS 27 (2019), IIT Mumbai
3. Invited Tutorial Lectures at ASSCA, Beijing, China , 2018
4. Invited Tutorial Lectures at CRYO- Ops 2018 in IHEP, Beijing
5. Key note speaker on Evolution of Helium Refrigerator at ICCR, Shanghai, 2018
6. Invited Special talk on : " Superconductivity for Power Application : Indian and International Scenario " at International Cable Tech Conference 2017 at CPRI, Bangalore

7. Plenary Talk "Application of Superconductivity and Cryogenics In India : Present & Future Prospect " :at Asian ICMC- CSSJ50 in Japan 2016

8. Presidential address at National Symposium on Cryogenics & Superconductivity(NSCS 26) at VECC. Kolkata in Feb 2017

9. " Performance and present status of Superconducting Linear Accelerator at IUAC" : AFAD 2016 in Kyoto, Japan

10. Invited to talk on Status of Cryogenics, Cryomodule and Superconducting Technology for Asian Accelerator programme in ACFA 2016 at Japan, ACFA 2015 in China, ACFA 2014 in Australia, ACFA 2013 in Russia.

11. Invited talk "Role of Cryogenics for future Accelerator Programme: at 25 th National

Symposium on Cryogenics (NSC 25) at Hyderabad, 2014

12. " Cryogenics & Superconductivity for Accelerator Programme in Asia " at Asian Conference on Applied Superconductivity & Cryogenics (ACASC 2013) in Turkey

13. Invited talk at Industry- Academic institute interaction meeting at Baroda in 2014

14. Superconducting Magnet development Programme at IUAC in Technical Institute of Chemistry and Physics , China in 2013

15. Superconducting Linear Accelerator at IUAC in Institute of Electrical Engineering, Chinese Academy of Science in 2013

16. Invited talk on " Superconducting Magnet programme at IUAC" in International Conference on IUMRS in Bangalore, Dec 2013

17. " How Accelerator programme Benefitted from Superconductivity and Cryogenics : Indian Scenario " at InPAC 2013 in Kolkata

18. Invited talk at the Workshop on 100 year of Superconductivity at VECC Kolkata in 2011

19. Growth of Cryogenics and Superconductivity in India since 1975 at National Symposium on Cryogenics at Rourkela in 2010

20. Exploring Alternative source of Helium Gas at CGIIG 2010 in Gangzhou , China

21. Activity of Superconductivity with Cryocooler in India at Sumitomo Heavy Industries Ltd in Tokyo, 2010

22. Invited talk at the Theme meeting on Cryocooler with Superconducting Technology at VECC. Kolkata in 2010

23. Superconductivity and Cryogenic Technology for Accelerator Development in India at Indian Institute of Technology. Kharagpur 2009

24. Growth of Liquid Helium Users in India and Indigenous effort to recover helium gas. At National Symposium of Gas manufacturing association in 2009

8. PUBLICATION (From Year 2000 Onwards)

1. **T. S. Datta ,** J Chacko, A Choudhury, M Kumar, S Babu, J Antony, S A Krishnan, S Kar, A Roy**.** " Cryogenic Activity for Superconducting LINAC Booster at NSC" Proceedings of the Eighteenth International Cryogenic Engineering Conference (ICEC18), Mumbai, India 2000 , p 131. Narosa Publication.

2. Jacob Chacko, S A Krishnan, S. Babu, Manoj Kumar, anup Choudhury, Soumen Kar, J Antony, **T S Datta**, A Roy " Cryostats for Superconducting LINAC Booster at NSC", Proceedings of the

Eighteenth International Cryogenic Engineering Conference (ICEC18), Mumbai, India 2000 , p 399. Narosa Publication.

3. Anup Choudhury, J. Chacko, S A Krishnan, S. Babu, Manoj Kumar, Soumen Kar, J Antony ,**T. S. Datta,** A. Roy "Cryogenic Distribution Systems at NSC" Proceedings of the Eighteenth International Cryogenic Engineering Conference (ICEC18), Mumbai, India 2000 , p 459. Narosa Publication.

4. Anup Choudhury ---------- **T. S. Datta** & A. Roy " Cryogenic Distribution System" Indian Journal of Pure & Applied Physics" Vol 39, 2001, p 54

5. Soumen Kar ----------**T. S. Datta** & A. Roy " Performance Testing of Cryostats for Superconducting Linac Booster at NSC" Proceedings of Satellite Workshop on Cryogenics for Large Systems, Ahmedabad. India 2000, p Proceedings of Satellite Workshop on Cryogenics for Large Systems, Ahmedabad. India 2000, p 146

6. S.Babu --------- **T. S. Datta** & A. Roy " Nitrogen Re liquefaction Plant for LINAC" Proceedings of Satellite Workshop on Cryogenics for Large Systems, Ahmedabad. India 2000, p 154

7. P. N. Prakash, **T. S. Datta.** ---------- " Superconducting Linear Acceleration System for NSC" , Pramana- Journal of Physics , Vol 59, No 5 , November 2002, p 849

8. P. N. Prakash, **T. S. Datta -**----------" Status of the Superconducting Booster Linac for the NSC Pelletron Accelerator" Proceeding of the 2 nd Asian Particle Accelerator conference, APAC -01 , Beijing, China, p-115

9. **T. S. Datta** et. al. " Commissioning & Testing of Cryo-network System for the Superconducting Linear Accelerator" Proceedings of the Nineteenth International Cryogenic Engineering Conference (ICEC19), Grenoble, France, 2002 , p 15. Narosa Publication.

10. **T. S. Datta** et. al. " Analysis of Shield Temperature for off line cavity testing Cryostat with and without Copper Jacket" Proceedings of the Nineteenth International Cryogenic Engineering Conference (ICEC19), Grenoble, France, 2002 , p 651. Narosa Publication.

11. Anup Choudhury, ------ **T. S. Datta,** A Roy " Development of Arc Cell based Detector to measure Nitrogen Impurity in Helium" Proceedings of the Nineteenth International Cryogenic Engineering Conference (ICEC19), Grenoble, France, 2002 , p 581. Narosa Publication.

12. **T. S. Datta** " Superconducting Linear Accelerator & Associated Cryogenics at NSC : An Overview and Present Status" Proceedings of National seminar & Conference on Cryogenics and its Frontier Applications, Calcutta, 2004 , p 20

13. S. Kar ------. **T. S. Datta**---- " Performance studies of Different Cooling Techniques Used for LINAC Cryostat of LINAC at NSC" Proceedings of National Seminar & Conference on Cryogenics and its Frontier Applications, Calcutta, 2004 , p 216

14. Suresh Babu ---------- **T. S. Datta** " Liquid Nitrogen Distribution Network for the LINAC at NSC" Published in the Proceedings of National Seminar & Conference on Cryogenics and its Frontier Applications, Calcutta, 2004 , p 213

15. **T. S. Datta et.al**. " Superconducting Linear Accelerator : Analysis of Measured load at 4.2 K from total LINAC System" Indian Journal of Cryogenics,Special Issue, Feb. 2005. Vol 1. p 46

16. S. A. Krishnan --------- , **T. S. Datta** " Liquid Nitrogen Powered Prime Movers "Indian Journal of Cryogenics " ,Special Issue, Feb. 2005. Vol 2. p 20.

17. Anup Choudhuri. **T. S. Datta** ----------S. Babu " Operational Experience of Indigenously Developed Automated Helium Purifier at NSC" Indian Journal of Cryogenics, Special Issue, Feb. 2005. Vol 2. p 23.

18. S. Babu -------. **T. S. Datta** " Design and Development of Vortex Tube" Indian Journal of Cryogenics, Special Issue, Feb. 2005. Vol 3. p 67.

19.R. S. Meena ---------, **T. S. Datta**. A.Roy " Insulation Performance Study at Low Temperature Calorimeter'' Indian Journal of Cryogenics, Special Issue, Feb. 2005. Vol 3. p 62.

20. **T. S. Datta et.al** " Operation experience on cool down of Superconducting Linac by Cryo-network System" Proceeding of the 2 nd. Indian Particle Accelerator Conference, INPAC -2005, Calcutta, p-473

21. Joby Antony -------, **T. S. Datta** " A VME based cryogenic Data Acquisition & control System (Cryo -Dacs). Proceeding of the 2 nd. Indian Particle Accelerator Conference, INPAC -2005, Calcutta, p- 219

22. S.Kar-------- **T.S. Datta**, " Vacuum Performance Studies for the 1st Linac module at IUAC Proceeding of the National Symposium on Vacuum Science and Technology (IBSNS 2005), Gandhinagar, 2005, p 79

23. S.Ghosh----------**T. S Datta**, D Kanjilal and A. Roy " Development of Niobium Based Superconducting LINAC at IUAC" Indian Journal of Cryogenics, Vol 32 (1-4), p 69, 2006

24. S. Kar ----- **T S Datta**, R G Sharma " A 7 Tesla Insert- Superconducting Magnet System " Indian Journal of Cryogenics, Vol 32 (1-4), p 131,2006

25. Jacob Chacko-------- **T S Datta** " Design and Development of Coil Winding Machine for Super Conducting Quadrupole magnet " Indian Journal of Cryogenics, Vol 32 (1-4), p113, 2006

26. **T.S. Datta** et.al. "Performance of Cryomodule and Cryo network System for the Superconducting Linac at IUAC. New Delhi" APAC 2007, Indore Proceedings (JACoW Publication)

27. S.Ghosh, ------ **T.S.Datta**, A. Mandai, D.Kanjilal and A.Roy "Commissioning of Superconducting Linac at IUAC - Initial Challenges and Solutions", Proceedings of European Particle Accelerator Conference, Genova, Italy, 2008 (JACo W Publication)

28. J.Polinski----------**T.S. Datta** " Synthesis of the Multilayer Cryogenic Insulation Modeling and Measurements" Advances in Cryogenic Engineering, Vol. 53, p 1367, 2008

29. **T.S. Datta,----- A. Roy et.al. " Superconductivity & Cryogenics for Linear Accelerator Programme at IUAC, New Delhi" Cryogenics, Vol. 49 (6), p 243. 2009**

30. S. Ghosh, --, **T S Datta**, A Roy et al. " Superconducting linac at Inter-University Accelerator Centre: Operational challenges and solutions"., **Phys. Rev. ST Accel. Beams** 12, 040101 .2009.

31. Anup Choudhury------- Maciej Chowrsky, **T S Datta** , Experimental investigation on Performance of Aluminum Tape and multilayer insulation between 80 K and 4.2 K , Indian journal of Cryogenics, Volume 34, 65-70, 2009

32. A Rai ------- T S Datta " Operational Experience with the IUAC LINAC " Proceeding of SRF 2009, Berlin, Germany p244 (JACoW Publication)

33. S.Kar, A. Choudhury, P.Konduru, R.Kumar, R.G. Sharma and T.S.Datta., " Experimental set up for the development of a room temperature bore cryogen free superconducting magnet system", ***Indian Journal of Cryogenics***, Vol 35, 246-251, 2010

34. **S. Kar**. R. Kumar. P.Konduru and T.S.Datta, A Study on Development of Joint between Pancake Magnets made of SS-laminated Bi-2223/Ag HTS Tape ,***Advances in Cryogenic Engineering, AIP, Vol. 55, 2010.***

35. S. Kar, M.Kumar, A Choudhury, J. Polinski, T.S. Datta and M. Chorowski**,** Performance Study of Liquid Nitrogen Thermo -siphon Cooling Loop ***Advances in Cryogenic Engineering, AIP, Vol. 55, 2010.***

36. Choudhury A., Chacko J, **Kar S**, Madhavan N & **Datta T.S**., " Design of HYRA superconducting quadrupole cryostat .,"***Indian journal of Cryogenics***., 35, 298-303, 2010.

37 S. Kar, P.Konduru, R. Kumar, M. Kumar, A. Choudhury, R.G. Sharma **and T.S.Datta** , Performance test and thermal analysis of conduction-cooled optimized current leads at non-optimum operation**,** ***Advances in Cryogenic Engineering, AIP.***Vol. 57,597-604*, 2012.*

38. S.Kar, R. Kumar, P.Konduru and **T.S.Datta**, Comparison of different joint configurations between two Parallel SS-laminated BSCCO/Ag tapes, , ***Physica C, Vol 470, 2010.***

39. **T S Datta** et. al**.** Development of Two additional Cryomodules for Superconducting Linac at IUAC , Delhi**. « Jacow Publication of Proceedings of IPAC 10, Kyoto Japan, 3831**

40. S. Kar, R. Kumar, P.Konduru and T.S.Datta "Development of Joints between Two Parallel SS-laminated BSCCO/Ag HTS Tape" . IEEE ***Transactions on Applied Superconductivity, Vol. 20, No. 1 , 2010.***

41. N. Madhavan----- T S Datta --- ."Hybrid recoil Mass Analyzer at IUAC- First results using gas- filled mode and future plan" Pramana, Journal of Physics, Vol 75(2), 2010 p 317 :

42. P.Konduru,-------- **T S Datta**., Performance test of indigenously developed 6T cryo free magnet with warm bore, Indian Journal of Cryogenics. Volume 36, 81-84, 2011

43. **T S Datta** et.al , " Superconducting linear Accelerator at Delhi ; performance status of Beam line Cryomodules "proceedings of International Cryogenic Engineering Conference (ICEC 24), Fukuoka, Japan , 245- 248, 2012

44. Soumen Kar**,** ----, **T S Datta** , "Analysis of Thermal Stability of Conduction-cooled Superconducting Magnet System" , ***Cryogenics (Elsevier)***. Vol.52 (12), 739-743,2012.

45 S. Ghosh ---- T S Datta, "Commissioning and operation of Superconducting LINAC at IUAC, Delhi " Proceedings of HIAT 2012, Chicago, USA . p 185

46. S. Kar**,** P.Konduru, R. Kumar, M. Kumar, A. Choudhury, R.G. Sharma and **T.S.Datta** " Experimental studies on thermal behavior of the 6 Tesla cryogen-free superconducting magnet system," ***Advances in Cryogenic Engineering, AIP***. Vol.57,909- 917,2012

47. T S Datta & R G Sharma " Growth of Cryogenics & Superconductivity in India, Indian Journal of Cryogenics , Vol 37 (2012), p 1

48. **T S Datta** et.al . Experimental Investigation and Analysis on Radiation Cooling of Cavities in Cryomodule for Superconducting Linear Accelerator. **Indian Journal of Cryogenics** Vol 38, 98-103,2013

49. S. Kar**,** P.Konduru, R. Kumar, R.G. Sharma and **T.S.Datta**, Electro-Thermal Behavior of Joint of Binary Current Lead of Conduction-Cooled Magnet, ***IEEE Transactions on Applied Superconductivity (IEEE),*****Vol.(1), 4800507,** 2013.

50. **T S Datta** et. Al : Transient behavior of Radiation Cooling of Cavities in Superconducting LINAC Cryomodule and the Analytical overview ; **" Heat and Mass Transfer"(Springer Publication) Vol. 50, 2014,p 827-833**

51. Anup Choudhury and **T S Datta**, "Performance of Helium Re-condenser for Quadrupole Magnet Cryostat " Indian journal of Cryogenics Vol 38. No. 1-4, Page no 173-177, 2013.

52. A. Rai--- T S Datta, " Completion of the Superconducting Heavy Ion LINAC at Inter University Accelerator Centre. Proceedings of SRF 2013, Paris, France p 103

53. T. S. Datta Soumen Kar, et al., Experimental and Analytical Investigation of steady state Thermal Profile of Forced-Flow LN2-cooled Thermal Radiation Shield for Superconducting LINAC cryomodule. ***Experimental Heat Transfer (Taylor & Francis) Vol.27. 2014.p 438-451***

54. S. Ghosh,----- **T S Datta**, D Kanjilal " Development and operational Aspects of Nb QWR based Heavy Ion LINAC System at IUAC. Delhi" JACOW Publication, Proceedings of LINAC 2014 , Geneva, Switzerland, p 640

55. **T S Datta** et.al "Final commissioning of the superconducting heavy ion linear accelerator at IUAC, Delhi" **Physics Procedia 67 (2015) 802 – 808**

56. Anup Choudhury**-------- T S Datta** "Cool down analysis of a cryocooler based quadrupole magnet cryostat" **Physics Procedia 67 (2015) 320-325**

57. **T S Datta** et. al " Theoretical analysis and experimental investigation on performance of the thermal shield of accelerator cryomodules by thermo-siphon cooling of liquid nitrogen" **IOP Conference series : Material Science & Engineering ,101 (2015) 012063**

58. Antony, J-------- T S Datta " Development of intelligent instruments with embedded HTTP servers for control and data acquisition in a cryogenic setup--The hardware, firmware, and software implementation" **Rev Sci Instrum. 2015 Dec;**86(12):125003.

59. Anup Choudhury------ T S Datta , "**Commissioning of the new 1 kW class helium refrigerator for superconducting LINAC at IUAC" Indian Journal of cryogenics Vol 40 (2015), p 118**

60. Soumen Kar, ----- **T S Datta** "Quench characteristics of 6 T conduction-cooled NbTi magnet system" **IOP Conference series : Material science & Engineering ,101(2015) 012077**

61. Santosh Kr Sahu, Anup Choudhury, S Kar, **T S Datta** " Studies on an electrical Isolator cum thermal conductor for a superconducting Quadrupole magnet" Indian Journal of Cryogenics, Vol 41 (2016), p 113

62. Navneet Suman---------- S K Sarangi, **T S Datta** " Experimental Load Map of two stage 1.5 W at 4.2 K GM Cryocooler. **Indian Journal of Cryogenics** Vol 41(2016), p 86

63. Vijay Soni------ **T S Datta**—S K Saragi, Soumen Kar " Thermal Impedance of Electrically Insulated thermal joint for hybrid current leads " , Indian Journal of Cryogenics , Vol 41 (2016), p 129

64. A. Nadaf------ **T S Datta.** " Helium exchange gas based variable temperature insert for cryogen-free magnet system" IOP Conference series : Material Science & Engineering ,171(2017) 012092

65. R N Datt---- **T S Datt**a. " Control and materials characterization System for 6T Superconducting Cryogen Free Magnet Facility at IUAC, New Delhi" IOP Conference series : Material Science & Engineering ,171(2017) 012138

66. Joby Antony, ----- **T S Datta** ---" Design details of Intelligent Instruments for PLC-free Cryogenic measurements, control and data acquisition", IOP Conference series : Material Science & Engineering ,171(2017) 012125

67. Sankar Ram Thekkethil , ------**Tripti Sekhar Datta** "Stress-Induced Magnetic Field Inhomogeneity in a 1.5 T Superconducting MRI Magnet" IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY, VOL. 28, NO. 4, APRIL 2018

Editorial Preface

1. IOP Conference Series: Material Science & Engineering: VOL. 171 (2017) 011001

2.Cryogenics 52 (2012),p 637

3. Cryogenics 51(6), 2011, p 219

4. Cryogenics , 50 (6) 2009

5. Indian Journal of Cryogenics Vol 32 (2006) to Vol 40 (2015)