

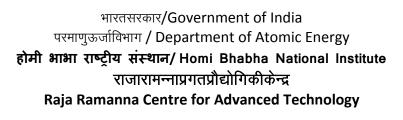
भारतसरकार/Government of India परमाणुऊर्जाविभाग / Department of Atomic Energy होमी भाभा राष्ट्रीय संस्थान/ Homi Bhabha National Institute राजारामन्नाप्रगतप्रौद्योगिकीकेन्द्र Raja Ramanna Centre for Advanced Technology



HBNI Faculty Profile

Name	Dr. Vikas Kumar Jain		
Designation	Associate Professor		
Research Area	Numericalsimulations,SuperconductingRFCavity,BeamWelding,Resonancestudy,Cryogenic system for accelerators		
		n his career at the DAE in 1995 after ram and later joined pleted PhD from IIT odes in RF cavities of nt advancements in t, HOM studies, and chievements include onducting cavities, s, and establishing ain's worked on SCRF RRCAT and Fermilab RN and IPR. He has development. He has ing him a valuable	
Ten Selected Recent Publications			
1. <u>V. Jain</u> , U.V. Bhandarkar, S. Yadav, S.C. Joshi, A.D. Ghodke, M. Lad and P.R. Hannurkar, 'Estimation of Higher Order Modes of Indus-2 RF cavity Using Combined Electromagnetic—Thermal—Structural Simulations', Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment (NIM-A) 01/2010; 612(2): pages 225-240. Publisher:- ELSEVIER			
Elliptical Sh Review Spec	V. Jain, U. V. Bhandarkar, S. C. Joshi, S. Krishnagopal, 'Analytical Study of HOMs of Elliptical Shape Cavities Using Oblate Spheroidal Eigen-Value Solution', <i>Physical Review Special Topics - Accelerators and Beams</i> , 14, 042002 (2011) Publisher:- American Physical Society (APS)		







3.	V. Jain, U.V. Bhandarkar, S.C. Joshi, S. Krishnagopal, "Matching index technique for		
	avoiding Higher Order Mode resonance in accelerators: INDUS-2 accelerator as a study", The Review of scientific instruments, 84:8 2013 Aug, pp. 086101. Publish		
	AIP Publishing		
4.	S C Joshi, S Raghavendra, <u>V. Jain</u> , A Puntambekar, P Khare, J Dwivedi, G Mundra, P K		
	Kush, P Shrivastava and P D Gupta, "Indigenous Development of Superconducting		
	Cavities, Cryomodules and Related Infrastructure for High Intensity Proton Linacs",		
	Indian Nuclear Society News, Vol. 10, No. 3 & 4, July-Dec., 2013, pp. 25-34. Publisher:-		
	Indian Nuclear Society		
5.	Rahul Shukla, V. P. Dhamgaye, <u>V. Jain</u> , P. Ram Sankar, C. Mukherjee, B. D. Pant		
	S. Lodha, "Fabrication of high aspect ratio comb-drive actuator using deep X-ray		
	lithography at Indus-2", Microsystem Technologies, 2014, Volume 20, Issue 7, pp		
6.	1273-1280. Publisher:- IOP Publishing		
0.	S C Joshi, S Raghavendra, V. Jain, A Puntambekar, P Khare, J Dwivedi, G Mundra, P K Kush, P Shrivastava, M Lad and P D Gupta, "Development of Infrastructure Facilities		
	for Superconducting RF Cavity Fabrication, Processing and 2 K Characterization at		
	RRCAT", IOP Series: Materials Science and Engineering 171 (2017) 012114,		
	doi:10.1088/1757-899X/171/1/012114. Publisher:- IOP Publishing		
7.	Vandna K.Gupta, Alka A.Ingale, <u>V. Jain</u> , R.Aggarwal, S.Pal, "Predicting surface		
	modification of InAs nanowires on laser irradiation using transient thermal simulation		
	and time evolution of Raman spectra", Journal of Alloys and Compounds, Volume		
	735, 25 February 2018, pp 1331-1338. Publisher:- ScinceDirect		
8.	Mayur Rathore, <u>Vikas Kumar Jain</u> *, Kuldeep Kumar Singh, Avinash Puntambekar,		
	Ashok Atulkar, Rajkumar Porwal, "Estimation of Lorentz force detuning and its		
	compensation on 650 MHz $\beta g = 0.92$ single cell SCRF cavity", IOP Journal Engineering		
	Research Express, Volume 3, Number 2, Available online from 13th May 2021,		
	https://doi.org/10.1088/2631-8695/abfdf7, Publisher:- IOP science. (*corresponding Author)		
9.	K. K. Singh, <u>V. K. Jain[*]</u> , D. V. Ghodke, A. Puntambekar, "A novel method for Lorentz		
	force detuning compensation in multi-cell superconducting RF cavity and its		
	validation at room temperature", Review of Scientific Instruments, 92(6), 063303,		
	2021, https://doi.org/10.1063/5.0046548 (*corresponding Author)		
10.	Sushil K. Sharma, Honey Gupta, <u>Vikas K. Jain*</u> , P. Ganesh, Ram K. Gupta, Digamber		
	P. Yadav, and Rakesh Kaul "Investigation of UHV Compatible Weld Joints of AA5083		
	and AA6061 materials for Synchrotron Radiation Source", Journal of Materials		
	Engineering and Performance, Available online from 4 January 2022,		
	https://doi.org/10.1007/s11665-022-06589-8 (*corresponding Author)		