Indian Particle Accelerator Conference (InPAC-2022)	
Day-1: 22nd March, 2022	
Parallel Sessions (1 to 4) - 14:00 to 16:00	
Poster Session-1	
11	Design and development of Workflow based software for managing the maintenance and upgradation activities during planned shutdowns of Indus Synchrotron Radiation facility at RRCAT
52	Field Integral Characterization of undulator U48 for Delhi Light Source
55	Synchronization and optical transportation of UV laser onto photocathode for electron beam generation at Delhi Light Source (DLS)
61	Design and optimization of a 100 kV DC electron gun for a 1.3GHz High Current Compact Superconducting Electron Accelerator
62	Design and optimization of a 1.3 GHz Gridded Thermionic Electron Gun for High Power Compact Superconducting Electron Beam Accelerator (HPCSEBA)
75	Compact Shielding design for a 15 MeV electron linear accelerator
76	High Voltage Test Results of Triode Type Electron Gun Using Spherical Cathode
94	Simulations to analyse the first electron beam detection at Delhi Light Source
130	Engineering challenges in the development of Photocathode deposition facility for the Delhi Light Source (DLS), Delhi
157	Automatic Detuning of the RF Cavity in RF System of SRS Indus-2.
Poster Session-2	
200	Design Optimization Studies for a 9.5 MeV Constant Gradient Electron Linac for Societal Applications
205	Electromagnetic design of RF couplers for a prebuncher cavity of industrial electron linac, and study of the beam loading effect in the prebuncher
209	Leak Detection and Rectification in Insulating Vacuum of Horizontal Test Stand-2 Cryostat
212	Fast Cool Down Studies of HB650 SCRF Cavity of Cryomodule
229	Effect of stray magnetic fields on electron beam
233	Parametric study of saturation of lasing of the IR-FEL through FEL Simulations
234	Lattice design of high brightness synchrotron radiation source with practical requirement of drift spaces for installing various components
241	Design, development and testing of Solid state e-gun modulator for Industrial 10MeV RF electron Linac
257	On-axis Injection Scheme for Booster Synchrotron of High Brilliance Synchrotron Radiation Source
Poster Session-3	
264	Numerical optimization of longitudinal magnetic field profile in a dipole for emittance reduction in electron storage ring
270	Simulation of 50 keV/700 mA low emittance thermionic electron gun for 10 MeV Linac

273	Simulation of 20 keV/100 mA strip electron gun for testing photon absorbers
276	Salient design features of high power Cockcroft-walton generator for 1MeV DC accelerator
298	Design and performance study of new RF cavity for 20 MeV Injector Microtron.
299	Experimental setup and preliminary measurements for improved tuning of 2π/3 Traveling wave linear accelerators.
301	Simulation and experimental measurements of low emittance thermionic electron gun.
319	Commissioning and performance optimization of 9.5MeV, 10kW food irradiation linac
320	Development of cooling system of industrial linacs
321	Engineering development of 50keV electron gun for food irradiation linac
Poster Session-4	
322	Design and Development of Beam Scanning System for Industrial Linac
323	Design and Development of 50 kV, 2 A, 16 µs, 300 Hz Marx Modulator for Electron Guns
324	Development of Beam Delivery Systems for Industrial Linacs at RRCAT
327	Pressure vessel for neutrino detectors-Technology solution to meet scientific goals
51	Applications of accelerators in health and medicine: A review
65	Experimental study to optimize the treatment efficacy of pharmaceutical effluents by combining electron beam irradiation with their existing treatment facility
73	Development of an experimental setup for calibration experiment in FRENA
Parallel Sessions (5 to 8) - 16:30 to 18:30	
Poster Session-5	
16	Design development of prototype RF tank circuit to power Low Energy Buncher
17	Measurement of beam profile in K130 Room Temperature Cyclotron at VECC
28	Design and Development of volume type multicusp Ion source at VECC for Medical Cyclotron
34	Induced Activity studies on Bore probe of Super Conducting Cyclotron
35	Relative complication based on mechanical tolerance in superconducting cyclotron
37	Conceptual design of Compact Superconducting Medical Cyclotron for medical diagnostic application
59	Beam optics design of 4th channel of extraction line of K500 Superconducting Cyclotron
67	Electromagnetic Design, development and qualification of multi-pole cusp magnet assembly for Magnetron Sputtering Ion Source
78	Study of Charge Exchange in Gaseous Targets for Low Energy Carbon Ions Using LISE++ Simulations
83	Beam Dynamics Study for the design of an 18 MeV Medical Cyclotron

Poster Session-6	
89	Remote control and monitor of electron gun power supplies over an Ethernet interface
108	Electromagnetic systems for Deep Underground Neutrino Experiment (DUNE)
136	Prototype development of SR011 Spoke cavity made in Aluminium
180	Multi-physics Analysis for 325 MHz Drift Tube Linac (DTL) for Future High Energy Proton Accelerator
202	Electromagnetic design study of higher order mode coupler for elliptical SCRF cavity
204	A comparative study of design of different types of superconducting accelerating structures for low energy section of a proton linac
210	Beam Optics Design for injection line of 18 MeV Medical Cyclotron
218	Optimization studies of 325 MHz Drift Tube Linac for the proposed IFSR project
226	COLD EP AND ITS ROUTE TO CURRENT OSCILLATION IN ELLIPTICAL CAVITIES
Poster Session-7	
240	Operational Status of the Superconducting Linac at IUAC
248	Design studies for a medical proton synchrotron
249	Langmuir probe measurements for plasma characterization of magnetron sputtering ion source for rare earth metal
253	Comparison of superconducting elliptical cavity shapes for high power CW linac
262	Development and characterization of an indigenous, compact multi-cusp microwave plasma source
281	Low energy beam transport design for MEHIPA-1 with a bending magnet.
293	Estimations of RF parameters during injection and beam acceleration in medical Proton Synchrotron
300	Characterization and commissioning of the LEHIPA MEBT
302	Status of super-conducting post-accelerator development for VECC RIB facility
Poster Session-8	
306	Development of ion source for lanthanide metals
311	Suppression of Multipacting in a Superconducting Spoke Cavity Using Higher Order Modes
58	Development of a low energy ring cusp ion source for thruster applications
88	FFAG based achromatic bending section for transporting 6 MeV/u multiple charge state RIBs
193	Simulation study of plasma generator for RF ignitor based Duoplasmatron positive hydrogen ion source
199	Vacuum simulation of RF ignited multi-plasmatron ion source
219	Development of Oxide coated and dispenser cathodes
252	Co-existence of compressive and rarefactive solitary waves in coupling of Langmuir wave and dust acoustic wave in warm plasmas

Day-2: 23rd March, 2022	
Parallel Sessions (9 to 12) - 14:00 to 16:00	
Poster Session-9	
99	Titanium beam acceleration through LINAC at PLF, Mumbai
113	Study of beam bunching using Multi harmonic buncher in the High Current Injector
168	Electrostatic and Wake Impedance Simulations of Ion Clearing Electrode for New Vacuum Chamber of Indus-1
244	Fast Beam Based Alignment procedure in High Brilliance Synchrotron Radiation Source
246	Ion Clearing Studies for Dipole Chamber of Indus-1 Storage Ring
250	Interplay of coherent and incoherent effects due to non-linear space charge in a periodic FD channel
255	Beam Lifetime Studies in Booster of HBSRS
256	Study of single-particle resonances in a high intensity particle beam using the particle-core model
259	Strategy for First Turn Beam Circulation in High Brilliance Synchrotron Radiation Source
263	Study of Single Bunch Instabilities in High Brightness Synchrotron Radiation source
Poster Session-10	
266	Beam based calibration of beam position monitors and corrector magnets in Indus-2 storage ring
279	Instability analysis of a self-consistent high-intensity beam through a solenoid channel.
285	Beam dynamics studies for LEHIPA based on the measured parameters.
289	Effect of Non Evaporable Getter (NEG) coating on Resistive Wall Impedances in ultra-low emittance electron storage ring
290	Momentum acceptance and Touschek beam lifetime estimations in ultra-low emittance electron storage ring
292	Non-Linear Beam Dynamics Studies for Booster Lattice of High Brilliance Synchrotron Radiation Source
296	Analysis of Turn-by-Turn BPM Data at Indus-2 Electron Storage Ring
314	Transverse Collimator Studies of Ring to Target Beam Transport Line for a 1 GeV Proton Beam
325	Comparative Parametric study of thermionic gridded gun between CST mesh cells and MATLAB approach.
Poster Session-11	
24	Thermal design of RF cavity for Compact Superconducting Medical Cyclotron
54	High Power RF Conditioning of the photocathode gun of IUAC-DLS
120	Design Study of Radio Frequency Cavity for Compact Superconducting Medical Cyclotron
139	DESIGN AND DEVELOPMENT OF WIDE-BAND HIGH POWER RADIO FREQUENCY SOLID STATE POWER AMPLIFIER
162	Design and Electromagnetic Simulation of RF Cavity at 499.75 MHz for Booster Synchrotron
166	Design Study and Electromagnetic Simulation of Broadband Ferrite Loaded RF Cavity

174	Low power RF characterization and high power testing of RF circulators
192	Design and development of a power combiner for ion beam buncher at VECC
Poster Session-12	
29	Design of [18O] water target for [18F] fluoride production in medical cyclotron
30	Design of Solid Target
33	Development of Direct Cooled Compact Solid Target System for High Current Proton Beam Irradiation Experiment at Medical Cyclotron Facility
105	Holistic approach for reliability of electric power feed arrangement for synchrotron radiation facilities at RRCAT, Indore
231	Automation of HVAC system for Indus-2 ring area at RRCAT, Indore
116	Recent advances in Indus Complex Pulsed Power Supplies
117	FPGA Based DPWM CONTROL FOR THYRATRON HEATER POWER SUPPLY
175	IGBT SWITCH BASED BOUNCER COMPENSATED PULSE MODULATOR FOR 10 MeV ELECTRON LINAC APPLICATIONS
183	Design and development of 90 kV, 2 A solid state hard switched modulator for electron gun
223	Upgradation of IRFEL S-band High Power RF system at RRCAT, Indore
Parallel Sessions (13 to 16) - 16:30 to 18:30	
Poster Session-13	
64	Design and development of calorimeter for RF power measurement and calibration
74	Design of Wien Velocity Filter with tuneable magnetic field using permanent magnets
77	Development of an Automated Test Equipment for Characterisation of a Wide-band RF Amplifier
110	Indigenous RF Power meter development for HF band RF amplifier
112	INTERLOCK AND PROTECTION SYSTEM OF 1 MW KLYSTRON RF SYSTEM FOR 20 MeV DTL OF LEHIPA
119	Efficient Low- Temperature Refrigeration System for Diffusion pump baffle cooling of K-130 Cyclotron.
215	System Development for Low Magnetic Permeability Welding of Type 316L Stainless Steel for Application in Particle Accelerators
222	SCADA System for Remote Control and Monitoring of Vacuum Furnace for Aluminium Brazing
309	Status and recent upgrades of LCW system for the RIB facility at VECC
326	Pressure vessel for neutrino detectors-Technology solution to meet scientific goals
Poster Session-14	
47	Conceptual Design of Stainless Steel Helium Vessel for βg=0.9 650 MHz Superconducting Cavity
60	Design & Optimization of 3 cell 1.3 GHz Superconducting RF Cavity for electron beam accelerator to treat wastewater
80	Micro-stepping Stepper motor controller for Tuner and Coupler
93	DESIGN STUDIES OF LOW BETA NIOBIUM QUARTER WAVE RESONATOR

115	RF design and optimization of a β = 1, 1.3 GHz single cell accelerating cavity for High Intensity Compact Superconducting Linear Electron Beam Accelerator
121	Design optimization for Superconducting Radio-frequency cavities
138	Dressing Joint Qualification of High Beta 650 MHz five-cell SCRF cavity
147	Modification for Resolution Enhancement in Fast Thermometry System for Quench Detection in SCRF Cavities during Cold Test
161	Design and development of RF system for plasma processing of Superconducting RF cavities
163	HIGH PRESSURE RINSING FACILITY UPGRADATION AND SRF CAVITY PROCESSING IN NEW ISO CLASS -4 CLEANROOM
Poster Session-15	
165	Development of Python Based GUI setup for Field flatness measurement and tuning of Prototype SSR Cavity at 325 MHz
177	Fabrication Experience of five-cell HB650 Bare SCRF cavities
239	Multiphysics study of an optimized β = 1, 1.3 GHz single cell superconducting cavity
245	Engineering design (Multi-physics Analysis) of the SSR-B cavity for MEHIPA
265	Development of test set-up and characterization of ceramic disks for coaxial RF couplers for MEHIPA-1
268	Design of 325 MHz RF couplers for superconducting spoke resonators in MEHIPA-1
271	Multiphysics analyses of 3 cell Superconducting RF Cavity for electron accelerator
312	Degaussing and Bucking coil system for Maintaining Magnetic Hygiene during cryogenic testing in HTS
Poster Session-16	
45	Study, simulation and optimization of magnetic field profile for ion implanter at 2.45 GHz frequency
190	Design of solenoid magnet for compact LEBT for proton Linac at RRCAT
225	Development of Extended Pole Sextupole Magnet
267	Design and optimization of a focusing solenoid for a 1.3 GHz High Current Compact Superconducting Electron Accelerator
280	Development of Vibrating Wire setup to determine the magnetic axis of solenoid
316	Design and characterization of 270˚ Dipole Magnet for ARPF
Day-3: 24th March, 2022	
Parallel Sessions (17 to 20) - 14:00 to 16:00	
Poster Session-17	
19	(2-30) MHz, 200 W Solid state RF power amplifier for BARC-TIFR Linac
20	Development of 64-Way High Power Cavity Combiner at 325 MHz for an Indian RF Accelerator
21	Development of High-Power RF Window at 352 MHz for LEHIPA

25	Power dependence of an RF oscillator on its operating frequency
97	Development of high power (200kW) solid-state 1MHz RF power source
111	Development of 500 W, 150 MHz Solid-state RF Power Amplifier for BARC-TIFR Super Conducting Linac
118	Design and development of square coaxial line based Broad Band 70 kW Dual Directional Coupler with EIA 6 ⅛ inch coaxial line interface
123	Design, development and testing of a 150 MHz, 300W solid state power amplifier for the BARC-TIFR PLF superconducting LINAC
142	Development and Commissioning of Protection Subsystem for 40 kW/650 MHz Solid State RF Amplifier System, in Horizontal Test Stand, RRCAT
143	SENSORS SYNCHRONIZATION FOR PULSED OPERATION OF SOLID STATE RADIO FREQUENCY AMPLIFIERS
Poster Session-18	
148	Development of 6.0 MW, High Average Power S-Band Microwave System Test Stand
153	Development of a 1 kW S-Band amplifier module based on planar Lim-Eom combiner
184	Design and Development of 100kW/325MHz Tetrode Based Pulse RF power System for RFQ.
185	Experimental study on RF heating at 325 MHz for Industrial Applications
188	Design and Simulation of 325 MHz Circulator for Solid State Power Amplifier
224	Commissioning of high power components of klystron based RF system for 10 MeV DTL of LEHIPA
243	Realization of 1.4 kW Solid State RF amplifier module at 107.5 MHz for high power RF system
318	Thermal design and simulation of LDMOS Amplifier heat sink for development of Re-circulating High Power Accelerator
43	Design, development and qualification of hybrid magnet assembly for Indigenous 6MW S-Band Klystron tube
Poster Session-19	
23	Design of a novel reconfigurable digital regulator for switching power converters
31	Design and development of a high stability current controlled bipolar orbit correction coil power supply for Microtron.
40	Control architecture of prototype Ion source power supplies for MC18 at VECC
81	Studies on Connection Schemes of Fast-ramped Power Converters Energizing Series String of Electromagnets
85	Design and development of a high stability phase shifted PWM power converter prototype of 270 degree bending magnet power supply for 10 MeV Linac .
87	High Voltage Power Supply (2kV/1.2A) Based on Hybrid Topology for Buncher of K-130 Cyclotron
102	Implementation of High Resolution DPWM Scheme in FPGA using Second Order Σ-Δ Modulator
103	Design and implementation of a simple motor control circuit for remote control of the subsystems of a 400kV Accelerator
107	Indigenous development of bias supplies of Klystron for 10 MeV Drift Tube Linac of LEHIPA

140	A high voltage crowbarless modular DC power supply for IOT amplifier in Indus-2 RF system
Poster Session-20	
151	Development of test stand for 50 V, 700 A solid state modular DC power supply
155	DESIGN AND DEVELOPMENT OF SWITCHED MODE PULSED POWER SUPPLY OF 400V/50A FOR HYDROGEN ARCING DISCHARGE
159	DEVELOPMENT OF A PRECISION TRUE-BIPOLAR STEERING MAGNET DC POWER SUPPLY
304	Local Control and Remote Integration of the Regulated High Voltage Power Supply for LEHIPA
313	Commissioning of Regulated High Voltage Power Supply for LEHIPA
109	Ultra-low temperature Dilution refrigeration systems for Quantum Technologies
284	Design and Analysis of Plate Fin Heat Exchangers in the perspective of Helium Liquefier/Refrigerator
10	Manufacturing of Upgraded Dipole Vacuum Chambers for Indus-1 Electron Storage Ring, RRCAT
44	Design and development of DC regulated power supply bank for prototype ion source of MC18 cyclotron
Parallel Sessions (21 to 24) - 16:30 to 18:30	
Poster Session-21	
156	Development of Undulator Vacuum Chamber for Infrared Free Electron Laser
160	Design, Fabrication and Testing of upgraded current measurement circuit up to femtoampere range for Ionization gauge
170	Ultra-High Vacuum Performance Evaluation of Upgraded Diagnostics Devices for Indus-2 and Prototype Beam Position Monitor for Low Emittance Storage Ring
186	Study of upgraded photon absorber design for Indus-2 Storage Ring
191	Development, testing, evaluation & calibration of thermocouple sensors for temperature measurement of UHV Chambers in Indus-2.
221	Development of drive system for turbo-molecular pump.
310	Present status of vacuum systems for VECC accelerators
135	SOFB operation and performance assessment towards orbit stability in Indus-2 SRS
303	Laser tracker alignment framework and results for LEHIPA accelerating structures
Poster Session-22	
56	Commissioning of Control Scheme for Beam Diagnostics and RF System of the Compact THz-FEL facility of IUAC
72	Design of the Allison-type emittance scanner for beam from ion source of 18 MeV Medical Cyclotron
84	STATUS OF THE BEAM PULSING SYSTEM OF PELLETRON-LINAC AT IUAC
145	Development of time synchronized beam image acquisition and characterization application for hydrogen negative ion source
197	Development of Fluxgate Multiplexer Module for HTS Control System

230	Design and Development of Prototype Beam Position Monitor for Low Emittance Storage Ring
232	Design, Development and Installation of Twin Beam Position Indicator in Indus-2 Synchrotron Radiation Source
260	Design of a wall current monitor for LEHIPA
282	Beam Profile Monitor Digitizer at 14UD Pelletron Accelerator
283	Design and Development of Scan Width Confirmation System of Industrial Linac
Poster Session-23	
286	Development of Software for Indus-2 Post-Mortem Beam Position Data Analysis
287	Development of Prototype Electronics for Beam Position Monitors in LEHIPA
13	Installation and Commissioning of RF protection and Interlock system at HTS facility, RRCAT
14	EPICS7 BASED RF CONTROL SYSTEM FOR BARC-TIFR LINAC BOOSTER
49	Design and Development of a RF distribution system for the RF cavities in the RIB facility at VECC
57	Present Status of the LLRF Controls for RF Cavities of High Current Injector at IUAC
125	Design and Development of Embedded EPICS IOC based software for Low Level RF at Horizontal Test Facility (HTS-2), RRCAT
158	Automated, contactless startup of Digital Low-Level Radio Frequency system of Indus-2
171	Design and Development of Real Time Event Monitoring & Detection System for Low Level RF Control System
172	Design and Development of Digital Low level RF System for RFQ at RRCAT
Poster Session-24	
238	Design and Development of Digital Multichannel LLRF Control for Booster Synchrotron & Indus-1 SRS
38	Design and Development of Simulator for EBWWT Accelerator
42	Design and Development of Simulator for Dual Energy RF Linac
124	Porting of Embedded Real Time Linux and development of Experimental Physics and Industrial Control System (EPICS) SCADA Board Support Packages (BSP) for System On Chip (SoC) Platform
126	Automation and optimization of measuring instruments for Pulsed Magnet measurement
131	Development of Beamline Booking Manager for Indus Synchrotron Radiation Sources
207	Design, Development and Installation of PLC Based RF Power Monitoring and Protection System for Booster Synchrotron and Indus-1 SRS
295	Prototype Microcontroller-based Instrumentation for Protection and Power Monitoring of RF Components in LEHIPA
305	Design of a Machine Protection System for MEHIPA
68	Design and Development of Programmable Timing and Trigger Unit

Day-4: 25th March, 2022	
Parallel Sessions (25 to 27) - 14:00 to 16:00	
Poster Session-25	
63	EPICS interface with Cyclotron Model and Analysis tools in Superconducting Cyclotron
66	MySQL based EPICS interface for Cyclotron Operation Database
69	Development and Commissioning of Control System for Beam Orbit Correction Coil Power Supplies in Microtron
101	Operational and maintenance experience of a 400kV Accelerator in Dual Ion Irradiation System-a few case studies
127	Development of Tuner Control System for Testing of SCRF Cavity in HTS
132	Development and deployment of Pinger magnet control system in Indus-2 SRS
134	Undulator operation, control and effect on beam orbit in Indus-2 SRS
181	Development of FPGA based Control Module for Scan Magnet Power Supply of Electron Beam Radiation Processing Facility
189	Design of MicroBlaze SoC based VME CPU mVME2C for Accelerator Control Applications
194	Control System for Horizontal Test Stand
Poster Session-26	
216	EPICS interface for Programable Trigger and Timing Unit
217	High Speed ADC (HSADC631XX) data acquisition and processing platform for VME and Standalone applications
291	System Diagnostics in Indus-2 Control System
39	Development of an indigenous ARDUINO based Search & Secure System in FRENA
53	Shielding calculation of Cyclotron Assembly and Test Facility, VECC
82	Radiation shielding optimization for high flux proton irradiation experiments
182	New Radiation Safety Interlock Systems at Indus Accelerator Complex
208	Radiation Shielding Calculations for the 10 MeV electron linac Injector test facility at VECC
227	Development and Commissioning of VME based RF protection interlocks and monitoring systems at different accelerator facilities
228	Faraday Cup Electrometer Data Acquisition System for Linac beam pulsed current measurement