ANNUAL REPORT

& AUDITED STATEMENT OF ACCOUNTS

2023-2024

National Institute of Science Education and Research, Bhubaneswar

Central Library

Nestled at the heart of the campus, the Central Library stands tall as a beacon of knowledge, offering an unparalleled array of essential resources and specialized services to meet the ever-evolving needs of seekers. With a fervent dedication to fostering discovery, the library maximizes its resources to enrich the academic and professional pursuits of students, faculty, and staff alike.

Spanning an impressive 69,089 square feet, the Library boasts a prime location and a wealth of materials spanning Biology, Chemistry, Mathematics, Physics, Earth & Planetary Sciences, Humanities, and Computer Sciences. Occupying the first and second floors of its grand building, the Central Library provides a bustling hub of activity. With ample seating for up to 400 individuals at a time, it offers a dynamic environment conducive to focused study and groundbreaking research.

LIBRARY HOURS:

Regular Opening Time	9.00 AM to 11.00 PM
Institutional Holidays	9:00 AM to 5:30 PM

LIBRARY AT A GLANCE:

The total collection of the central library as of 31st March 2024 stands as follows:

Type of Resources	Volume
Purchased Books	25105
Gratis Books	1912
Bound Volume Journals	1458
E-Books	10141
Electronic Databases (Bibliographic)	5
Electronic Databases (Full-Text)	26
Electronic Journals	11130
CD/DVD	226
PhD Thesis & MSc. Dissertations	588
Children's Collection	405
Hindi Collection	269
Odia Collection	246
Popular Science Collection	50
Newspapers	07
Magazines	23

"The library is the temple of learning, and learning has liberated more people than all the wars in history." - Carl T. Rowan

The Central Library makes every effort to expand academically by procuring a wide range of renowned magazines and newspapers. These resources have been carefully selected, so users can enhance their learning experience outside of textbooks with up-to-date information on current events as well as research in various disciplines. The following information outlines these sources:

Newspaper: The Samaj (ସମାଜ), The Sambad (ସମ୍ବଦ), The New Indian Express, The Times of India, The Hindu, The Economic Times, Dainik Jagaran(दैनिक जागरण).

Magazines: India Today, The Week, Outlook, Sportstar, Time, Yojana, Frontline, Champak, The Economist, Science Reader, Science Reporter, Discover India, Reader's Digest, Magic Pot, Tinkle, Highlight Champ, Highlight Genies, Tell Me Why, Magic Read & Colour, Student Edge, Bhavana, Physiotimes, Natural Geographic Kids.

LIBRARY SERVICES:

The Central Library Offers The Following Services:
1. Ask Librarian (librarian@niser.ac.in)
2. Reading Area
3. Circulation (Issue, Return, Renewal & Reservation)
4. RFID integrated KIOSK for Self-Check-out and Self Check-in
5. Web-OPAC
6. Overnight Book Lending
7. QR Code
8. Reference and Information Services
9. User Awareness
10. Library Orientation Program
11. Current Awareness Service
12. Document Delivery Services
13. Anti-Plagiarism Software – iThenticate
14. Screen Reader through JAWS Software
15. Subject Guides
16. User Guides
17. Special Collection (Hindi, Odia, Popular Science)
18. Children's Library
19. Publications & Citations
20. Newsletter (Bi-Annual)
21. Information & News Casting
22. Library Website
23. Institutional Digital Repository
24. Indian Research Information Network System (IRINS)

25. Library Brochure
26. National Digital Library of India Membership
27. New Arrivals of Books
28. Research Support: Citation Styles
29. Table of Contents (Print Journals)

INFRASTRUCTURE FACILITIES:

- Air-conditioned reading area accommodating up to 400 users concurrently
- CCTV surveillance for enhanced security
- Central Board Room and Conference Room
- Cashless payment option via UPI for late fee collection
- Computers provided for accessing e-resources
- Wi-Fi connectivity throughout the premises
- Designated silent zone for uninterrupted study
- E-reading section for digital resources
- Scholar's Zone for focused research
- Spacious seminar halls with modern equipment capable of accommodating national and international conferences
- Digital kiosks available for convenient access to the catalog and for book renewal purposes

RESEARCH SUPPORT TOOLS:

- Ithenticate (Turnitin): Originality and plagiarism check software
- Grammarly: Writing support tool
- Web VPN: Enables off-campus access to e-resources through NISER.
- Quick Start Guides: Access Mendeley, Zotero, and RefWorks quick start guides on the website for user convenience.
- SciFinder-n: Offering comprehensive access to scientific information, facilitating efficient exploration and discovery.

E-RESOURCES:

E-Databases (Bibliographic Databases):
- CCDC – CSD Enterprise License (CCDC)
- MathSciNet (AMS)
- Science of Synthesis (Thieme)
- Sci-Finder-n (CAS- ACS)

E-Journals:

American Association for Cancer Research (AACR), American Association for the Advancement of Science (AAAS), American Chemical Society (ACS), American Economic Association (AEA), American Institute of Mathematical Sciences (AIMS), American Institute of Physics (AIP), American Mathematical Society (AMS), American Meteorological Society (AMS), American Physical Society (APS), American Society for Microbiology (ASM), Annual Reviews, Association for Computing Machinery (ACM), Bioscientifica, BMJ, Cambridge University Press (CUP), Cold Spring Harbor Laboratory (CSHL), De Gruyter, Duke University Press, Elsevier, Emerald, European Mathematical Society (EMS), Heldermann Verlag, IEEE, Institute of Mathematics Polish Academy of Sciences (IMPAN), International Press, IOP Publishing, IOS Press, John Hopkins University Press (JHUP), Journal of Visualized Experiments (JOVE), JSTOR, Khayyam Publishing, Lippincott Williams and Wilkins (LWW), Magnolia Press, Mary Ann Liebert, Mathematical Science Publishers (MSP), Microbiology Society, Optical Society of America (OSA), Oxford University Press (OUP), Portland Press, Princeton University Press, National Academy of Sciences (PNAS), Project Euclid, Rockfeller University Press (RUP), Royal Society of Chemistry (RSC), SAGE, Society for Industrial and Applied Mathematics (SIAM), Society for Neuroscience, Springer Nature, Taylor and Francis (T&F), The Company of Biologists, The Geological Society of America (GSA), The Royal Society, Thieme, Wiley, World Scientific.

E-Books:
- Cambridge University Press (8 titles) – Perpetual Access
- Elsevier (561 titles)
- Oxford University Press (1 title) – Perpetual Access
- Pearson (8 titles) – Perpetual Access
- Springer Link (9567 titles) – Perpetual Access
- Taylor & Francis (4 titles) – Perpetual Access
- Wiley (63 titles) – Perpetual Access
- Thieme (16 titles)

Tata Memorial Hospital
Annual Report 2023—2024

Excellence in Cancer Care, Education, and Research
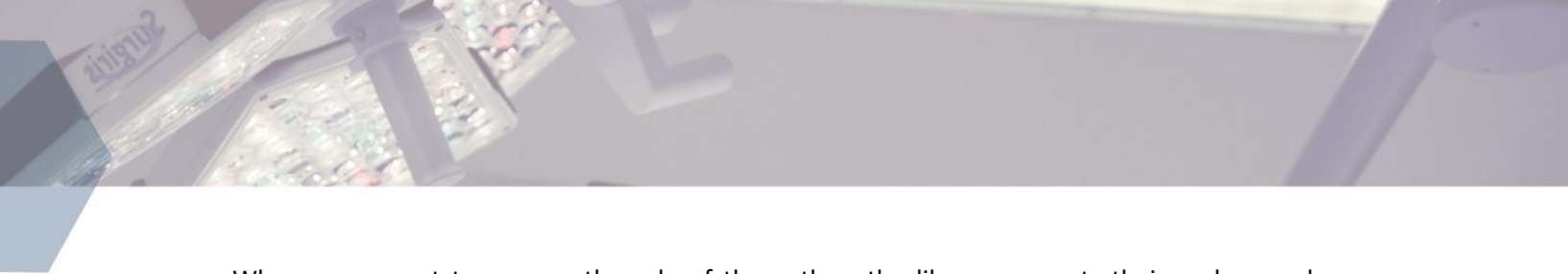
Library Sciences

Head, Mrs Deepali Kuberkar

The library currently has a seating capacity of 52 users at a time, including a computer cell. However, the library has become a hub for bona fide users visiting to obtain useful information; this is reflected in terms of about 67 users visiting per day to use an array of commercial and public domain resources. To achieve this, in addition to regular library orientation programs, the library has organized a few training sessions for the benefit of users. Moreover, library professionals offer hands-on instructions and practical tips for effective and efficient searches in a tailor-made manner. Web-OPAC allows users to search for library holdings effectively. Another way for off-campus users is to avail themselves of the My Loft facility.We have now extended this facility to other centers, and we conducted training sessions for the same.

The library caters to the ever-growing demand for end users by subscribing to 103 journals, of which 100 are available online. It has also provided access to more than 30 journals from DAE-Elsevier. Approximately 50 titles on the Ovid platform were accessible online. In addition, the library subscribed to three prominent e-databases, viz., BNF, CINHAL-NRC, and TNM. During this period, the library purchased about 42 books. The current library collection includes about 8,576 books, 20,422 bound volumes, and a thesis and dissertation collection of over 1,300 in print and CD formats.

When users want to assume the role of the author, the library supports their endeavors by providing various metrics such as Journal Index Factor (JIF), h-index, and others. In this context, using iThenticate software, the library considers 65 requests for plagiarism checks. Library professionals also educate young users about similar public domain sources and paraphrasing tools. The library indexed 424 full-text staff publications.

During this period, the library received 247 requests for 651 articles and fulfilled 588 of them (90%). Additionally, the patrons made 2,001 reprographic requests, resulting in 14,36,457 copies.

TECHNOLOGIES FOR
NEW INDIA@75
आज़ादी का अमृत महोत्सव

Annual Report

2023-24

वार्षिक प्रतिवेदन

वार्षिक प्रतिवेदन
ANNUAL REPORT

राष्ट्र की सेवा में परमाणु

एच आर आई

HRI

ATOMS IN THE SERVICE OF THE NATION

हरीश-चन्द्र अनुसंधान संस्थान
Harish-Chandra Research Institute

छतनाग मार्ग, झूँसी, प्रयागराज (इलाहाबाद) – 211 019
Chhatnag Road, Jhunsi, Prayagraj (Allahabad) – 211019

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LIBRARY

In an academic or research institute, a library plays an important role in the dissemination of knowledge. In fact, the **ambience of the library** reflects the quality of the education and research imparted by the institute. The Central Library plays a **vital role** in furthering the academic and research missions of HRI and facilitates the creation and dissemination of knowledge. The range of services offered by the library is comparable to the best libraries in the country. HRI Library has recognised the importance of the **academic vibrations** required in the library and has been growing in this direction right from its very inception. HRI's library serves as a **knowledge hub,** containing resources in print and electronic form.

<div align="center">

A Glimpse of the Library: 16   17

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Collection Development and Management:

Building a collection of reading materials is one of the important functions of the library, which supports the academic and research work of students, faculty, staff, and other users. Our library collection comprises all types of materials related to **mathematics** and **physics** and is considered one of the best in the country, which is its greatest asset. The total collection of the library as of 31st March 2024 stands as follows:

Resources	details	Subscribed E-resources/ Databases	Other resources and facilities:	
Total Collections:		**Total Collections:**	Theses	144
			CD's/DVD's	102
Books (Print)	**63203**	**Journals: 152**	General Magazines	21
No. of Books – Print	22919	Subscribed: 98	Newspapers	07
No. of Bound Volumes – Print	38292	DAE's ODOS Consortium:42	Seating Capacity	53
Gratis – Print	1992	National Jls: 12	Carpet Area	550 Sq. Mts
		Databases/Archives:	Computers for Users/ OPAC	04
Newly added materials:		1] MathSciNet	Kiosk for self issue-return	01
Books	**613**	2] Project Euclid Journals	Photocopy machine	01
Gratis-books	**49**	3] JSTOR	Lamination machine	01
			Spiral machine	01
		Life-time archives	Library Management Software: with RFID Technology	Koha 22.05 version
		1] DMJ 100 archive		
		2] AIP archive		
		3] IoP archive		

Library Working Hours:

The institute's library is one of the best equipped libraries in India, and it aims to put the motto **"Books are for use"** into practice.

The library works on all days of the year except holidays of national and social importance.

Monday to Saturday	8.00 am to 2.00 am (midnight)
Sundays & Gazetted holidays	8.00 am to 8.00 pm

Library Team:

The day-to-day functions of the library at HRI are efficiently managed by a team headed by a qualified librarian with 25+ years of professional experience. He is supported by a SO "C" along with a team of well-trained library staff. The library staff performs their duties exceptionally well and is always appreciated by library users for the service mindedness, intelligence, enthusiasm, and sincerity with which they serve them. In addition to their regular jobs, officers and staff members are involved in various committees and the institute's other work.

Team members:	
Dr. K.K. Suresh Kumar	Librarian
Mrs. Anju Verma	SO "C"
Shri. Vivek Kumar	Junior Library Assistant
Shri. Deepak Yadav	Junior Library Assistant
Shri. Kamta Prasad	Peon
Other contractual staff members	05

Library Advisory Committee:

The Library Advisory Committee works towards continual improvement of the library's activities so that the library and its facilities achieve a fair degree of acceptability and appreciation amongst the users.

Members:

Prof. Anirban Basu	Convenor
Dr. Gyan Prakash	Member
Dr. B.S.S. Sreedhar	Member
Dr. K.K. Suresh Kumar	Member & Librarian

Highlights:

Services:	
1] Reader's assistance	10] Theses consultation
2] Reference & Referral services	11] Remote Access (VPN- Virtual Private Network)
3] Circulation Services	12] Faculty publications/ Institute Publication's corner.
4] OPAC/ Library Website	13] Online access of E-resources
5] Reprographic, Spiral binding and Lamination	14] Open Educational Resources: NDL, NPTEL, MIT's resources, free search engines
6] Institute ID Card generation	15] Awareness on copyrights and self-archiving policies.
7] Book Reservation service	16] Self-Issue/Return System (RFID enabled security gate system)
8] Orientation for newly joined library users & individual mails.	17] Collection development/ Book Exhibition
9] SDI (Selective Dissemination of Information) and CAS (Current Awareness Services) (New Arrivals Services & Information on Indented books)	18] Library Website/OPAC

Services/ Best Practices:	
A "Best Practice" in simple terms, is known as the practice, that paves the way for enhancing the existing functions and helps in the effective implementation or use of the process.	
19] Off-Campus Services through E-mail: [Scientific Information]	23] Inter Library Loan service
20] Research support services (Through mail) a] Awareness on "Research and Publication Ethics". b] Reference Management tools & Similarity Check support: Shodchakra, SheRNI, IRINS, Vidwan, INFED,Turnitin; c] DST projects, Awareness on Predatory Journals d] Awareness on copyrights and self-archiving policies.	24] Personal and issued books are permitted inside the library
21] Misplaced books tracing service	25] Translation service
22] Newspaper clippings	26] 18 hours of uninterrupted services

Library Management Software/RFID Technology:

The library is automated and enabled with RFID technology by using KOHA open source library management software (22.05 version). All in-house activities in the library, including Acquisition, Cataloguing, Circulation and Serials Control etc., are fully computerised. The Online Public Access Catalogue (OPAC) of the library is operational on the Intranet. It can be accessed online to search more than 63203+ bibliographic records available in the library database.

RFID Technology:

The library has implemented the **Radio Frequency Identification (RFID)** system. It is the best automated library automation system used worldwide and is an effective way of managing the collections of the library and providing enhanced services to the users, with benefits like self check-out of books, self-check-in, finding misplaced reading materials, inventory accuracy, stock verification procedures, security control, smart card issuance, etc.

Inter Library Loan Services/Sharing of Resources:

The library is a part of DAE family/libraries so the HRI library can help in obtaining articles and other materials that HRI library does not subscribe to and get it from other libraries all over the India. Also, the library maintains excellent relations with a number of major institutions and libraries in India for exchange of journal articles etc., for the mutual benefit of the users.

Major Initiatives:

The library has taken various initiatives to improve the existing services, infrastructure, facilities, and procurement of bookshelves and reading chairs to increase the collections and user strength to provide strong and dynamic support to the academic, research programmes and policies of the institute. Some of these initiatives are described in the following sections.

- **Active participation:** conducted library committee meetings, implemented policies and programs of the library as adopted by the library committee, and authorities.

- **Legal Agreement Procedure:** Introduced the legal agreements (stamp paper) process for the subscription of online and print journals, databases, and e-book packages. Thereby cautioning vendors and publishers about the consequences of misuse of the huge subscription amount.

- **Safe environment:** Regularly conducting discussions with publishers and vendors regarding invoices, currency conversion rates, price proof, discounts, the institute's subscription tier level, regularly checking access to online journals, and keeping a safe environment for the library's spending budget.

- **Value-added Services:** Every year, a marked budget of Rs. 2–3 crore is spent on the library. Therefore, to value the spend, we made a continuous effort to facilitate the user community with value-added services with the help of the library team.

- **Best Practices:** In consultation with the Library Committee, the Registrar and Director implemented best practices in the library, strived to make HRI-Library one of the best research libraries in the DAE community, and tried to bring library standards to the national/IIT/IISER library level.

- **Infrastructure APEX Project (Library Component):** Presently, the library team is working on the project and, from time to time making progress as per the DPR for the period of 2021–2024.

- **DAE-Elsevier Consortium 2024 & One DAE One Subscription (ONOS):** Handled DAE-Elsevier Consortium-2024 & ODOS-2024 for the institute and attended several online meetings.

- **Systematic re-shelving of books:** Experienced library staff members have been assigned to devote one to two hours daily in the morning in the stack areas to facilitate easy retrieval of books. This process is continuous process throughout the year, and it will give easy access to the books and other materials without any hurdles. This initiative has produced considerable satisfaction among users.

- **Library Lounge/Collaboration Learning Space:** The library has created the library lounge/collaborative learning space at the entrance of the library, near the security checkpoint. This space has been created to facilitate space for users who want to learn, have one-on-one discussions, discuss together or in a group to solve problems, work on a project, or have a meaningful discussion in a limited amount of time. Also, newspapers and general
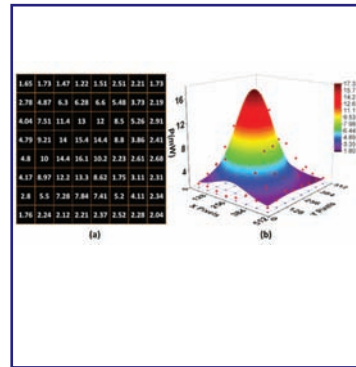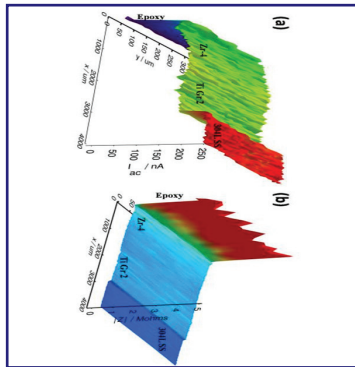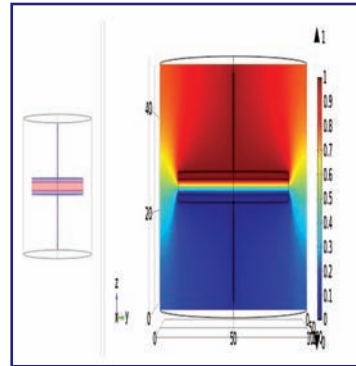
magazines are kept for the users benefit. We provided comfortable furniture for the users. This area is quite popular with library users.

- **Hindi Book Collection:** HRI Library has built up a good collection of books in Hindi language and made different sections like Language, Literature, Biography, Poem, Fiction, Novels, Religion, Science Literature, Children's Literature, and General Reading. These books are prominently kept near the stack area in the library to promote their usage. To increase the use of **Rajbhasha Hindi, the** HRI library regularly sends a **NEW ARRIVALS LIST** to the HRI library user community.

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CHAPTER V

Basic Research

VI.10 Digital Asset Enhancement & Value Added Services

Scientific Information Resource Division (SIRD) is an advanced research library caters to the needs of more than 5000 Scientists, Engineers, Research Scholars, and students of various DAE Units at Kalpakkam by providing access to relevant information at their desktops. The collection includes 62,000 books, 48,000 back volumes, 600 journals, 15,000 standards, two lakh technical reports, e-books, scientific/technical databases and research assistant tools . SIRD has constantly been endeavouring to modernize and keep itself abreast with the latest in the field of Library through the implementation of digital library infrastructure and services. SIRD is rendering various services to the Centre like interlibrary loans, photography, videography, reprography, desktop design, in-house printing publications, auditorium, and video streaming.

Centralized Video Repository for IGCAR

SIRD has taken initiative to build repository of videos of IGCAR for the last 2 decades. Videos on the cassette form were digitized and rendered for necessary post production. Video streaming facility, which was installed in 2011 at Sarabhai auditorium also had the archival of recorded videos of the events. These videos were taken and after post production works like sound mixing, title addition and other effects, were uploaded into a server system. For this purpose, a centralized video library solution was implemented in SIRD during the last year. More than 200 videos with necessary meta data were uploaded into the repository (Fig. 1).

RFID based Book Drop System

RFID-based Integrated Library Management System with the latest gadgets are used for library management activities. During this period, SIRD has enhanced the circulation system by providing RFID based book drop machine (Fig. 2). This system can be operated from the entrance of SIRD premises (Library) on 24 x 7 basis. This system allows the patron to 'Check in' (return) books even during non-office hours, thereby avoiding fines when returned after due date.
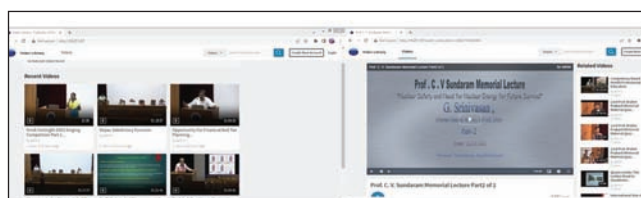

Fig. 1. Video Repository of IGCAR

Fig. 2. RFID based book drop system.

Digital Display Signage

Three numbers of 75-inch digital display signage with KIOSK structure are procured and commissioned. They are being used to display the achievements of the centre, various developmental activities, SIRD book collection, new arrivals and announcements to the visitors (Fig. 3). Similarly, Convention Centre projection system is enhanced with 12000 lumens based laser projector with HDMI Display systems.

Digital contents are uploaded into high performance digital library infrastructure comprising of server, storage and networking. Institutional repositories are developed through open source solutions such as DSpace, Linux, Apache & Mysql. Servers are maintained on IT cooling racks with UPS power backup. Fire alarm systems, CCTV surveillance, Zero client user access stations, Information access KIOKS are some of the technologies implemented in SIRD. Servers run on 24/7 basis to provide uninterrupted smooth information access to patrons across the IGCAR campus

SIRD brings out the ISSN-based in-house publication of IGCAR viz IGC Newsletter every quarter. SIRD efficiently executes the responsibility to bring out IGC annual report, desktop calendars, pocket diaries, planners, and bulk printing of confidential documents,
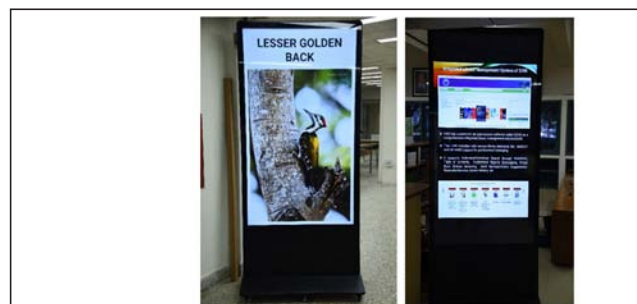

Fig. 3. Digital display signage

designing the templates for brochures, souvenirs, etc. Research data output of the institute like the theses, IGC technical reports, in-house publications like IGC Newsletter, Annual reports, pre-prints, journal and conference publications are archived in a centralized Institutional Repository (IR). The metadata of the knowledge assets are stored in Standard Dublin Core format and supports open archives initiative for metadata harvesting. Springer & IOP eBooks on Physics, Chemistry and Astronomy, Research assistant tools like grammarly ,ithenticate, flipping book, E-journals, databases and standards are being subscribed by the SIRD. Digital resources are accessible 24/7 at desktops (within and outside the campus) of the patrons and user alerts are provided through email.

VI.11 Deployment of Open-Source Security Information and Event Management System and its Integration with Proxy Servers

A Security Information and Event Management (SIEM) system continuously collects security-related data from various sources across the network, including firewalls, servers, applications, and user devices. This data includes security events, log entries, and user activity.

A SIEM system performs three key functions:

a. Security Information Management (SIM): Analyzes and stores historical security data for compliance reporting, security audits, and forensic investigations.

b. Security Event Management (SEM): Monitors security events in real-time, identifies suspicious activity, and generates alerts for potential threats.

c. Log Management: Aggregates and normalizes event logs from diverse sources, making them easier to search and analyze.

Deployment of SIEM system at IGCAR

In order to enhance threat detection and improve incident response, an open-source SIEM system has been implemented and deployed at IGCAR. It consists of 3 servers each with two Intel Xeon 16-core processors, 32 GB memory and a 3.3 TB SAS Hard Disk with Raid protection. These servers are designated the following roles – Manager, Sensor and Search.

The Manager node provides a web interface to configure the SIEM system, see the alerts and statistical reports, and perform log analysis and detailed forensic investigation. It works in co-ordination with the Search Node and the Sensor Node.

The Sensor node, which acts as a Network Intrusion Detection System (NIDS), consists of two interfaces --- an interface on which it talks to the Manager Node and the Search Node, and another monitoring interface which listens in promiscuous mode. The port of the network switch where the monitoring interface is connected is configured to receive a copy of all the network packets flowing between the Internet and the Intranet. The Sensor Node captures and stores the entire traffic seen on the monitoring interface for 2 days to facilitate in-depth forensic analysis. It retrieves the network metadata and
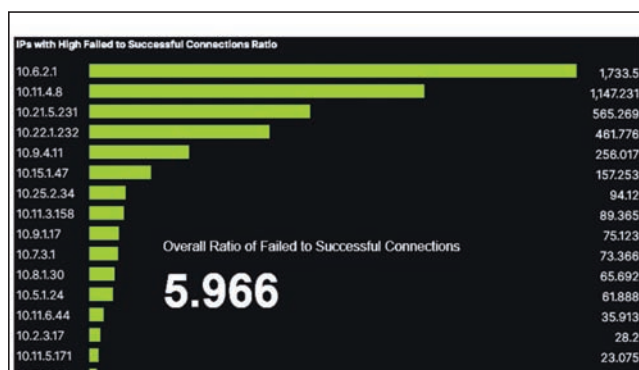

Fig. 1: A dashboard listing the internet IPs with unusually high internet access failure to success ratio

relevant security information from the captured traffic and checks for the presence of threat signatures using the threat signature database periodically fetched from various national / international sources. The network metadata, and threat alerts, if any, are handed over to the Search Node for further processing and storage.

The Search node acts as the back-end database. It consists of an open-source search and analytics engine which can store structured or unstructured data in a NoSQL format, and offers lightning-fast searches and analytics.

Integration of the SIEM system with Proxy Servers

In order to enhance network security, users of the IGCAR campus network are allowed to access the internet only through a user authentication system constituted by a set of proxy servers. The user activities logged by the proxy servers are critical in investigating cyber security events. Therefore, the SIEM system was configured to fetch and process the raw logs generated by the proxy servers, extract the relevant information and store them in the Search node. Various dashboards have been developed to analyse the internet access data and report the statistics in real-time (see Fig. 1 for a dashboard that lists the intranet IPs with unusually high internet access failure to success ratio). Python based modules are also being developed to perform in-depth analysis of the threat alerts by correlating proxy logs with NIDS logs.

Annual Report
and
Audited Statement
of Accounts

2023 – 24

Institute of Physics

Bhubaneswar

operates over its own IP addresses from the Indian Registry for Internet Names and Numbers (IRINN). The Institute is a part of the EDUROAM facility.

The centre provide technical support for administrative work, such as accounting, personnel management, stores management. Several software packages such as MSOffice, Wings 200 Net, Tally and multilingual software are in use.

The center conducts training, workshop and awareness programs in relevant areas time to time.

5.3 SAMKHYA (सांख्य): High Performance Computing Facility

SAMKHYA (सांख्य) - High Performance Computing (HPC) Facility at the Institute is a hybrid environment that consists Sixty (60) Compute Nodes, two (2) Master Nodes, Four (4) I/O nodes (OSS & MDS) and 50 TB of object storage, QDR Infiniband interconnect and 1 Gbps Local Area Network. The infrastructure is of two (2) precision ACs (10 tons of refrigeration each) and uninterrupted supply through three (3) 40KVA & one (1) 60 KVA UPS to facilitate the system. The facility consists of 1440 CPU cores, 40 NVIDIA Tesla K80 cards and 40 Intel Xeon Phi 7120P.

This facility has been ranked in the list of top supercomputers in India by CDAC, Bengaluru (January 2018 report at http://topsc.in). The facility is acknowledged in various publications by the user community.
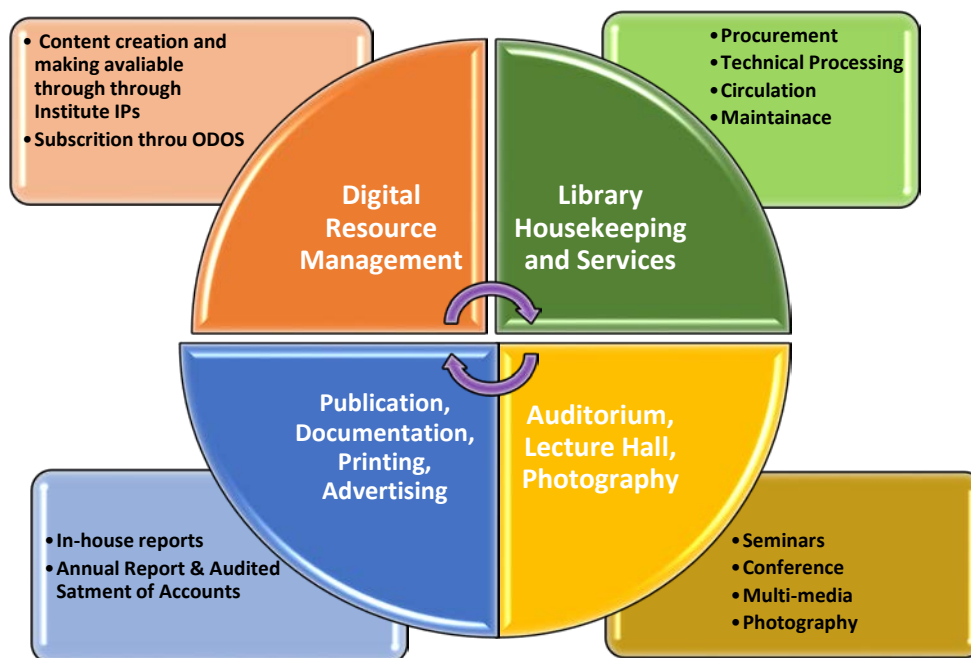
5.4 ANUNET FACILITY

Institute of Physics is a node on ANUNET with the provision to connect other units of DAE directly by VSAT link for voice and data communication. Seismic monitoring equipment has been installed in the Institute and seismic data is being continuously transmitted to Bhabha Atomic Research Centre (BARC) for analysis using ANUNET. The link is also used to connect with DAE and another institute on ANUNET through video conferencing setup.

In addition to members of the Institute, the computer facility is also being used by Researchers from several other universities and colleges in Odisha for their academic work.

5.5. LIBRARY

The primary objective of the IOP Resource Center is to carefully select, acquire, process, and disseminate scientific and technical resources in both print and digital formats to the research community of IOP and its visitors of the institute. However, the IOP General Library is dedicated to serve the IOP community for the general purpose reading and fostering a culture of reading. Besides its standard library services, the IOP Library provides various additional services, such as reprography, printing, publishing, advertising, photography, videography, document delivery, and an auditorium with lecture hall services. The IOP Library also actively participates in outreach programs and hosts conferences and seminars. A visual representation of the IOP Library's operations is shown in the accompanying figure.

The Library facility is open to both members of the Institute and individuals from other academic institutions, particularly DAE members and those affiliated with the Department of Higher Education of the Government of Odisha. For a comprehensive overview of the Library's holdings, users can visit the Library Portal at http://www.iopb.res.in/~library.

The Library offers a diverse collection that includes over 17,600+ print books, 7,500+ e-books, and 23,643 bound Journals. Subscriptions are being renewed for 135 e-journals, along with selected print Journals, Magazines, and Newspapers. Additionally, the Library has obtained perpetual access rights to electronic archives of publications such as IOP (UK), John Wiley, Springer Physics and Astronomy, Scientific American, World Scientific, and Annual Reviews Archives (OJA). Furthermore, the Library provides access to e-books in the Lecture Notes in Mathematics and Physics series, ensuring perpetual access to back-files.

As a core member of the DAE Consortium, the IOP Library has access to over 500 journals from leading publishers such as Elsevier, Springer-Nature, and Wiley through the ODOS (One DAE One Subscription) initiative. This initiative aims to revolutionize open access research within the DAE, following the model of ONOS (One Nation One Subscription).

The Library has subscribed to iThenticate, an Anti-Plagiarism Web Tool, to uphold the academic integrity of the Institute. This tool is accessible through the library portal at http://www.iopb.res.in/~library/plagiarism.php and can be utilized within the Institute's IP ranges. Additionally, the Library has also subscribed to Grammarly Tool, a cloud-based software service provided by Grammarly Inc., USA, which assists researchers in writing and citation auditing.

As part of the resource sharing program, the Library assists users in obtaining articles from other libraries. Users can also request articles for academic purposes through Digital Inter-Library Loan. Notably, the IOP Library was the first library in Odisha to be automated using the Integrated Library Management System (ILMS). It has then migrated to an RFID-based Smart Library Solution powered by the KOHA (a widely used Open-source ILMS) in the year 2018. This system

supports various library housekeeping activities, including acquisition, cataloguing, circulation, and serial control, with automated check-in and check-out functionalities. To search for books and journals, users can utilize the Library's WEB-OPAC, accessible at https://www.iopb.res.in/~library/ or http://10.0.1.16/.

The Library manages the publication, printing, and advertisement (PRD) division of the Institute, as well as provides reprographic services. To ensure that scientists and the research community at IOP are well-informed about the efficient utilization of e-resources and technology-enabled services, the Library organizes training-cum-demo sessions at regular intervals. Additionally, the Library offers various extension services, including facilitating study tours, inters for Library and Information Science (LIS) students and supporting their projects and dissertations.

5.6 AUDITORIUM:

IOP boasts a splendid auditorium within its campus, purposefully designed for hosting a wide range of events such as Colloquiums, Seminars, Workshops, Conferences, Cultural activities, and Social programs on a regular basis. The auditorium is equipped with top-notch facilities, ensuring a high-quality experience for attendees. It has a seating capacity of over 330 people, providing ample space for gatherings and events.

ANNUAL REPORT
2023-2024

प्लाज़्मा अनुसंधान संस्थान
Institute for **Plasma Research**
Bhat, Gandhinagar 382428

A6. Scientific, Technical & Civil Support

A6.1 Scientific Information Resource Centre (SIRC)
A6.2 Mechanical Engineering Services Division (MESD)
A6.3 Air Handling Unit and Air Conditioning Services
A6.4 Civil Infrastructure

A6.1 Scientific Information Resource Centre (SIRC)

Scientific Information Resource Centre (SIRC) is providing specialized Information Resources and Publication Management services using up-to-date tools to the scientific community involved in the Research and Development activities of Plasma Physics and Fusion Science and Technology.

During the year 2023- 24 a total budget of Rs.   33945702.00 was utilized and added the following to its collection:
139 Scientific and Technical Books were added to the collection, 87 Books were procured through a Books Exhibition organized at the Institute on 24th January 2024, 13 Hindi books, 176 Reprints, and 31 Pamphlets were also added to the library collection.

IPR has signed a Transformative Agreement with IOPP, UK. The Read & Publish agreement allows access to the entire IOP Journals collection and also Publishing in IOP's fully Open Access journals. IPR is also a part of the DAE's Transformative Agreements with publishers viz. Springer-Nature and Wiley under One DAE One Subscription (ODOS) consortium. Library has also subscribed to 60 periodicals and added 1 new online journal title as well as 2 journal archives to the e-collection and continued to subscribe to major databases such as SCOPUS, APS-ALL, Online Archives of core journals.

Library through its Digital Display Board provides interactive and up-to-date Current Awareness Services. Library is also delivering email-based FYI-Fusion News Alerts services to IPR, CPP and ITER-India users. Total 360 News items were sent/displayed and archived as an Alerting Service. Library continued to collaborate with DAE units and other National and International libraries to provide Inter-Library Loan (ILL) services. 90.75% of the requests made by staff members were satisfied through ILL service. IPR Library provided documents to other institutes against their queries and 100% of the total need were satisfied.

In 2023-24, Library provided 25797 photocopies/ prints and 6409 scanned copies to the users.

Publication Management Services were carried out efficiently and SIRC continued to subscribe to anti-plagiarism software tool for checking similarity index of the publications. A total of 661 manuscripts (Abstract/Papers) and 05 Patent information were broadcasted to the Staff through the Pre-Publication Broadcasting System and Pre-Patent Broadcasting System respectively on the Intranet portal. A new feature for Conference and Awards information submission has been developed and implemented on the INTRA portal.

SIRC published the following during the year 2023-24: Internal Technical Reports – 68; Internal Research Reports – 124; IPR Publications in Journals – 176; IPR Publications in Conference Proceedings – 22; Book Chapters – 5.

Hands-on Training was imparted to the three Multi-Tasking Staff deputed at the Library. Library Internship was provided to Four library science students from Gujarat University, Ahmedabad. Orientation was given to newly joined members, Research Scholars and SSP students. Library is actively participating and contributing to other Institutional activities, such as Swacchata Pakhwada, Safety Week, National Science Day, etc. Library is also actively involved in OLIC and promoting usage of Hindi language.

A6.2 Mechanical Engineering Services Division (MESD)

MES division has four sections namely Engineering Design & Analysis Section (EDAS), Inspection & Quality Section (IQS), Drafting Section and Workshop Section. The activities undertaken by the division is conforming to full product cycle which includes concept to commissioning. The major tasks are design and analysis of the product/system, preparation of the engineering drawings, fabrication/manufacturing and inspection, testing and commissioning. The division is also supporting the inspection of incoming stock items at Store. The division comprises of team of Mechanical Engineers, draftsman and technicians. MESD division has provided the services to different divisions such as SST-1, Aditya, Magnet, Cryogenic, Neutronics, Remote handling, NBI, Fusion Blanket, Cryopump, Fundamental Physics etc. MESD also provided the extensive services to FCIPT also.

The EDAS of MESD has been actively executing various tasks related to design, analysis, fabrication, inspection and testing. Since its inception in April 2017, section has satisfactorily completed and report is submitted for more than 170 tasks for different divisions. The design is carried out using ASME, WRC codes, vacuum protocol etc. The FEM analysis is performed to ensure the structural integrity of the system/product. The different kind of analysis such as structural, thermal and coupled is being carried out routinely using ANSYS.

The IQS of MESD has been actively executing various tasks related to Welding Procedure Specification, Manufacturing and Inspection Plan, Material testing, Quality Assurance, Quality Control, Different kinds of Non-Destructing testing etc. The activity related to assembly, disassembly, interference checking, new components assembly etc. of the different components for SST-1 are also supported by this section. During the year, IQS division also completed more than 20 tasks.

The Drafting section of MESD is equipped with 6 licences of CATIA-V5 R13 installed on work stations for 3D modelling and 2D drawing preparation, HP inkjet printer T2300 plotter. Section has been supporting the users for designing and preparation of engineering drawings for various systems of IPR. During the year, section has executed more than 600 job cards for 3D modelling and 2D engineering drawing preparations. Section is also supporting the poster printing for different conferences and presentations.

The Workshop section of MESD is equipped with modern versatile machineries including machining and fabrication (shearing, rolling, TIG welding etc.) facilities catering for needs of IPR, FCIPT, ITER-India and CPP for the fabrication of a system/product required by users. Workshop

भौतिकी संस्थान
भुवनेश्वर
Institute of Physics
Bhubaneswar - 751005, India
(परमाणु ऊर्जा विभाग, भारत सरकार का एक स्वायत्त अनुसंधान संस्थान)
(An Autonomous Research Institute of Department of Atomic Energy, Govt. of India)

No. IOP/LIB/2017/___**3364**___   *Speed Post*   Date: ___**28.3.18**___

To,

RapidRadio Solutions Pvt Ltd
B-404, Satyamev I
Opp Gujarat High Court
SG Highway, Ahmedabad-60

Sub: Purchase order for Supply and Installation of RFID based Library Automation Services through open source software KOHA for Library, Institute of Physics, Bhubaneswar.

Ref: e-Tender Notice No. 31/2017-18 dated 23-11-2017 and extended up to 27-12-2017

Dear Sir,

With reference to the above-mentioned subject, we are pleased to place the purchase order for supply, installation, commissioning and maintenance of the items as per the details mentioned in **Annexure - A** for and on behalf of Library, Institute of Physics, Bhubaneswar to your firm in accordance to the terms and conditions of our e-tender and mentioned overleaf:

Sl. No.	Name of the Item	Quantity	Total Amount in INR
1	Supply and Installation of RFID based Library Automation Services through open source software KOHA	Complete Set* (*As per the detailed quantity mentioned in Technical Speciation of e-Tender document*)	18,54,960/-
Total FOR, IOP Site including GST (as appliacble) In words: Rupees eighteen lakh fiftyfour thousand and nine hundred sixty only			**18,54,960/-** ✓

Terms & Conditions:

1. Prices are inclusive of all taxes (GST as applicable), freight, excise duties, forwarding, transit insurance and installation charges.
2. If your quoted Item is not available in the market, you have to supply the Higher Version/replacement of that Item in the quoted cost in the same time duration with prior approval of Institute of Physics, Bhubaneswar – 751005.
3. **Delivery and installation:** Within **two months** from the date of receipt of the purchase order.
4. **Warranty and Maintenance service:**
   - **Warranty:** Comprehensive onsite warranty for **two years** from the date of installation. Necessary warranty certificate in this regard should be furnished after completion of installation.
   - If any equipment and related components give continuous trouble, during the warranty period, the bidder shall replace the same with new without any additional cost to the Institute.

   - **Maintenance service:** Free maintenance services shall be provided by the Bidder during the **warranty period.**

   - The maximum response time for maintenance complaint from any of the destinations specified in the Schedule of Requirements/Purchase order(s) (i.e. the time required for bidders maintenance engineer to report at the installation after a request call/telegram is made or letter is written) shall not exceed 24 hrs.

   - Coordination with the software vendor (in this case **M/s Aviar Technologies Pvt. Ltd.,** Kolkata for KOHA installation, maintenance, support and data migration from Libsys) and/ or

to do liaisoning with other service providers (if any) to achieve the end-to-end connectivity should be done by your firm. The bidder should provide a dedicated **SPOC** (Single Point of Contact) for receiving the complains/issues (if any) for IOP Library for proper co-ordination and resolving the issues. After receiving the issues/complains, the SPOC should pass the message to the technical support team either of **Rapid Radio Solutions** or **Aviar Technologies** as per the merit of the query and revert back to Librarian, IOP with a solution/service level indictor (SLI).

- o The AMC will be made with the bidder as per the quote in the financial bid during the bidding process reckoning after the completion of the warranty period.

5. **Payment**: Payment for Goods and Services shall be made by Institute of Physics as follows:
   - o No advance payment will be made.
   - o 90% payment will be made after 100% delivery and installation of the material/software (as the case may be) on submission of original invoices and delivery challans duly signed and stamped by the authorized representative of IOP along with 10% Performance Bank Guarantee. Balance 10% payment will be released on successfully testing, training, commissioning and warranty certificate duly signed and stamped by the authorized representative of the user department.

6. **Penalty Clause:**
   - o If the bidder fails to deliver and install the requisite hardware and software within 2 months of the acceptance of the confirmed purchase order, then a sum equivalent to one percent (1 %) of the total contract value shall be deducted from the payment for each calendar week of delay or part thereof.
   - o Delay in excess of 2 or 4 weeks will be sufficient to cause for termination of the contract. In that case the Performance Bank Guarantee of the bidder will be forfeited.
   - o In case, the bidder does not supply the ordered items for any reason thereof, the bidder will be liable to pay the difference amount to the purchaser, over and above the performance guarantee, which indenter department has to pay to the next or other selected bidder for purpose of the said items.

7. **All other terms and conditions remain same as per NIT** vide e-Tender No. 31/2017-18.
8. The bidder is requested to furnish the acceptance of this P.O. duly signed and stamped along with order confirmation within 7 working days from the receipt of purchase order to the undersigned.
9. The bidder is advised to arrange for the delivery and installation of the materials in consultation with the Library and purchase department along with other supporting documents like performance security, proforma invoice to the undersigned.
10. In case of any issues arising out of this contract the same shall be referred to the Institute and the decision of the Director of this Institute shall be final.

Thanking you,

Yours faithfully,

REGISTRAR

Encl: Annexure – I

Copy to:
   1. Accounts Officer
   2. Office File.

HRI_Library_boundvolumes