Institutional Repositories Movement in India: Tips & Strategies for Success in the Challenging Times

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The paper highlights the institutional repositories (IRs) movement in India updated till Nov 2009. The paper attempts to identify and evaluate institutional repositories in India with special reference to initiatives taken by twelve DRDO laboratories/establishments including DESIDOC. This paper gives a comprehensive listing of workshops conducted in India to promote development of IRs and also lists institutional repositories developed in India, most of which are available in the public domain. The IRs are identified through a study of the literature, as well as internet searching and browsing. A questionnaire based survey followed by select telephonic interviews were conducted to examine the number of DRDO labs/estts, who have already hosted IRs, and those who intend to do so in the near future. Use of open source software, especially DSpace, is found to be most commonly used for the creation of IRs in India. The collection size in most of the IRs of India is in few hundred records only. IRs face a seemingly endless set of interrelated challenges. Most pertinent questions are: How can we attract content? And how can we integrate IRs into the Institutions landscape?

The paper highlights the Indian initiatives in the field of IRs. It provides an overview of the 69 institutional repositories of Indian institutions in a range of subject disciplines. This article highlights software requirements for setting up IRs and the current trends in India. The paper conducts a literature review and questionnaire survey on IRs already established and those planned in near future among DRDO Labs/Estt and to incorporate it with the authors’ own experiences. The authors believe that institutional repositories will help in the sharing of institutional intellectual output and will increase article citations and the impact factors of Indian publications. The LIS professionals should play a proactive role in the growth of e-resources in institutional repositories to enable IRs to become sustainable in the future also. This paper explores some of the challenges and benefits to libraries operating an IR. Lastly, this paper will examine the future of IR’s as it relates to issues in sustainability and viability for institutional repositories.

Keywords: Gyansrota, India, Institutional Repositories, IR software, Open Access Archives, Open Access Literature, Open Publishing.

1. Introduction

Clifford Lynch (2003), Executive Director, Coalition for Networked Information, stated “An institutional repository is a set of services offered by a university to manage and make accessible scholarly digital materials created by the institution and its community members.”
According to Heery & Anderson (2005) Institutional repositories:
- Contains content, deposited by owner, creator, or third party;
- Repository architecture manages content as well as metadata;
- Repository offers a minimum set of basic services, e.g. put, get, search, access control;
- Repository must be sustainable and trusted, well-supported and well-managed;
- If an Open Access repository, it must also:
  - Provide open access to its content (notwithstanding legal constraints);
  - Provide open access to its metadata for harvesting.

According to ROAR (as on 1st Nov 2009), there are 49 registered repositories (Figure-1) in India (out of total registration of 1515) whereas OpenDOAR lists only 36 registered repositories in India (out of total registration of 1513). At present there are over 69 IRs in India (Appendix- B) of which 53 are hosted on public domain (Internet) and balance 14 on Intranet/LAN. The leading IRs are developed by IISc, ISI, NAL, NCL, NIO, RRI, DU, IITs, DRDO, etc. The Indian Institute of Science, Bangalore, was the first to set up an institutional repository in India. It uses e-prints archiving software. It can be accessed by anybody but submission of documents to this repository is limited to the IISc research community. It has approximately 15,391 e-prints in its archive (as of 1st Nov 2009).

![Figure-1: Growth of Indian IR as per ROAR](image)

An institutional repository content (Figure-2) may include full-text contents of journal articles, conference papers, book chapters, monographs, research reports, project reports, theses, dissertations, patents, presentations, computer programs, tutorials, convocation addresses, audio materials, video materials, course materials, multimedia materials, handbooks, data books, technical manuals, beside many others types of documents. Institutional repositories have capability to build up collections for different user's categories and incorporate different forms of documents in different formats.
There is an overall commitment to using open source software for setting up archives, although proprietary software is generally used for word-processing and presentations. Use of open source software especially DSpace is found to be most commonly used for the creation of IRs in India. IR of IIT Mumbai is moving from its present Greenstone software to DSpace.

2. Scope and Methodology

The Indian IRs were identified through a study of the literatures and with the help of internet searching and browsing. A questionnaire survey was made to examine the number of DRDO labs/estts, who have already hosted IR, and those who intend to do so in near future. This paper draws on the results of interviews conducted in the later half of 2009 with DRDO librarians and information professionals involved in the installation and management of IRs. It provides a snapshot of current activity and future plans for growth of these repositories. Telephonic interviews conducted were semi-structured and participants were asked to comment on their subject expertise and training, choice of software, resources
such as staffing, infrastructure and sources of funding, repository policies, promotion and advertising, user feedback, institutional support and future plans. Where person-to-person interviews were not possible, answers to open-ended questions were provided by participants via telephone and e-mail.

3 IR Initiatives by DRDO

3.1 ADE, Bangalore
The Aeronautical Development Establishment (ADE) is a laboratory of India's Defence Research and Development Organisation (DRDO). Located in Bangalore, its primary function is research and development in the field of military aviation. Its recent successful projects include Lakshya (an aerial target), Nishant (a reconnaissance UAV), flight simulators (LCA, Ajit, Kiran, MIG-21) and avionics packages for Tejas-LCA. It earlier worked on Sparrow (mini-UAV) and Ulka (aerial target).

Its IR is branded as ADE digital repository. Its IR is hosted on intranet & uses Eprints software. Its IR covers presentations by scientists, research papers, etc type of materials. Total records in its IR are 267.

3.2 ARDE, Pune
Established in 1958, Armament Research & Development Establishment (ARDE) is entrusted to achieve the cherished goal of self-sufficiency in the vital field of Armaments. In 1966, ARDE moved to its present location at Pashan on the out-skirts of Pune City.

Its IR is available on intranet as Digital library@ARDE. It uses DSpace as software support for its IR. The contents of IR are that standards and patents (34,000) and e-books & research papers (5180). Total records in its IR are 40718.

3.3 CVRDE, Chennai
Combat Vehicles Research & Development Establishment (CVRDE) is known for manufacturing Vijayanta and Arjun Tanks, at Avadi, Chennai. It uses GSDL 2.5 software for its IR. The best part of IR at CVRDE is that it has a lot of technical photographs of products and services of CVRDE. Total collection in its IR is 217.

3.4 DFRL, Mysore
The Defence Food Research Laboratory (DFRL) came into being on 28th December 1961 under the aegis of Defence Research and Development Organization (DRDO), Ministry of Defence, Government of India, at Mysore especially to cater to the varied food challenges of Indian Army, Navy, Airforce and other paramilitary forces. The R & D efforts at DFRL are aimed at designing and engineering lightweight, convenience pack rations for Army, Navy, Air Force and other paramilitary forces. These pack rations do not require any elaborate cooking or preparation at the consumer's end and remain shelf-stable under...
varying climatic conditions for periods ranging from 6 months to 1 year when packed properly. It is using Dspace for hosting its IR and having total records in its IR are 13786.

3.5 DIAT, Pune

The Defence Institute of Armament Technology as it is known today came into being as the Institute of Armament Studies in 1952. In 1967, the Institute moved to its present location at Ginnagar, Pune. On the basis of accreditation by the All India Council of Technical Education (AICTE), Pune University recognised eight courses for the award of ME degree in 1980. In the year 2000, the Institute acquired the status of a Deemed University, and is popularly known as Defence Institute of Advanced Technology (DIAT).

IR at DIAT has annual reports, in-house documents, dissertation & theses, finance documents, question papers of various courses held and research & technical papers. Total number of records in IR at DIAT is 280.

3.6 GTRE, Bangalore

Gas Turbine Research Establishment (GTRE) is a laboratory of the Defence Research and Development Organisation (DRDO). Located in Bangalore, its primary function is research and development of aero gas-turbines for military aircraft. As a spin-off effect, GTRE has been developing marine gas-turbines also.

Its IR is available at Digital library@TICL. It uses DSpace as software support for its IR. The highlight of this IR is that a lot of power point presentations are also loaded on this. Total records in its IR are 189.

3.7 LRDE, Bangalore

Electronics and Radar Development Establishment (LRDE) has its genesis in the Inspectorate of Scientific Stores created in 1939 at Rawalpindi which was redesignated as Technical Development Establishment (Instruments and Electronics) in 1946 and located at Dehradun. The establishment was renamed in 1962 as LRDE and dedicated to the design and development of Radar and Communication equipment. Its present location is at CV Raman Nagar, Bangalore.

Its IR is branded as LRDE digital repository. It uses DSpace software. At LRDE the users/authors are not given permission to directly upload the data on IR. However LRDE regularly conducts IR awareness programmes for its users. Total records in this IR are 1943.

3.8 MTRDC, Bangalore

Microwave Tube Research & Development Centre (MTRDC) is a constituent R&D laboratory of Defence Research & Development Organisation, Ministry of Defence. It was established in 1984, with an aim to develop advanced types of microwave tubes to meet the present and futuristic needs of the country and establish self-reliance in this strategic area.
Its IR is branded as MTRDC publication archives. It uses Greenstone digital library software. The authors/users are neither given training to directly upload data to its IR nor are allowed to do so directly. Total records in its IR are 106.

3.9 NPOL, Kochi

The origin of the naval system technology in India can be traced to the establishment of the laboratory called Indian Naval Physical Laboratory (INPL) by Indian Navy in 1952 at Cochin in Kerala. Subsequently, INPL was rechristened as Naval Physical Oceanographic Laboratory (NPOL) which functioned from within the Naval Base in Kochi. In the year 1990, NPOL moved into the sylvan surroundings at Thrikkakkara, a suburb of Kochi. NPOL has an offsite setup of underwater acoustic research facility at Idukki Lake, 100 km east of Kochi. NPOL also owns, since 1995, INS Sagardwani a 2000 ton Oceanographic research vessel used for oceanographic data collection.

The digital library DSpace@npol was put in place by the Technical Information Resource Centre (TIRC) of NPOL that customised DSpace to suit the requirements of the scientific community. Initially, the lab had used Greenstone, open-source software (The Hindu, 11Oct, 2008).

The lab has been able to digitise close to 2,000 reports, including annual reports, research reports and scientific papers besides conference proceedings, in-house publications, student’s project reports, technical journals and course material. The library, made accessible from all computer terminals in the lab through Intranet, is considered to be our institutional repository, a move towards conjuring up a knowledge management apparatus. The total number of records available in its IR is 2000.

Functions such as developing collections, organisation, submission, review, access and retrieval are managed at distributed locations over the network. Users register as members and subscribe to entire collections or sub-collections depending on need. Mail alerts are sent out to members of each collection whenever a new document is added to the subscribed collection. There are various ways of access permissions that can be given to items in the collection. As a result, classified information is only made visible to authorised viewers.

3.10 R&DE (E), Pune

Research & Development Establishment (Engineers), Pune traces its origin to the Inspectorate of Engineer Stores set up at Kolkata during World War II for exercising quality control on stores of indigenous origin and to provide guidance to manufacturers producing items used by the Services. With the expansion of activities of DRDO, need for a separate establishment for design and development of equipment for the Corps of Engineers was felt and R&DE (Engrs) was established at Dighi in Pune on 09 Feb 1962.

The Establishment’s primary role was the development of mobility and counter mobility equipment for the Corps of Engineers. The lab has provided self sufficiency in indigenous development of Combat Engineering Equipment.
Its IR has hosted a lot of standards for day to day use for scientists & staff of R&DE (E). Unfortunately at this lab the authors/users are neither given training to directly upload data to its IR nor are allowed to do so.

3.11 SASE, Manali
Snow and Avalanche Study Establishment (SASE) was set up in 1969 near Manali to combat the hazards of snow and avalanches not only to help the Armed Forces to fight and live in the mountains but also to accelerate the pace of socio-economic growth of the inaccessible snowbound hill regions. SASE was initially assigned the task of studying snow and avalanche problems along certain mountain highways in snowbound belt of Indian Himalayas. Today SASE’s Research and Development Centre (RDC) is also functioning from HIM PARISAR, Sector 37-A, Chandigarh.

Its IR is branded as HIMGYANSROTA. It has over 600 records but unfortunately authors are not permitted to upload their data to IR. Himgyansrota also does not grant permission to authors/users to upload data in the IR.

3.12 Gyansrota (DRDO Institutional Repository) by DESIDOC
Defence Scientific Information and Documentation Centre (DESIDOC) is an establishment of Defence Research and Development Organization (DRDO), Ministry of Defence. DESIDOC became a self-accounting unit and one of the laboratories of DRDO on 29 July 1970.

Since it became a self-accounting unit, DESIDOC has been functioning with the aim to be a centre of excellence in disseminating scientific and technical information on cutting edge technologies for defence research and development. It provides S&T information, based on its library and other information resources, to the DRDO headquarters, and its various laboratories located at across India. DESIDOC is primary information resources centre for providing information, library, reprographic, and translation services. It also provides continuing education and training to the DRDO library and information science community.

DESIDOC is a nodal agency for collecting and preserving of intellectual output of DRDO scientific heritage. It has created an IR of DRDO intellectual contents using DSpace open source software. Defence Scientific Information and Documentation Centre (DESIDOC), Delhi, has launched one of its most ambitious projects by hosting the DRDO Institutional Repository on DRDO Intranet (DRONA) (7). The institutional repository named Gyansrota is a digital archive of the knowledge capital created to by the scientific community of DRDO which is accessible to end users in the organisation. The service can be accessed through the ‘single window to services’ webpage of DESIDOC by clicking on to the DRDO IR
The repository aims to centralise, capture, store, preserve, and provide access mechanism of the research output, i.e., intellectual content of DRDO. This includes research papers and articles, technical reports, adhoc publications, learning material, images, patents, book chapters, biographical sketches, etc. Initially the repository is hosted on Intranet and later on it will be hosted on to Internet also.

The advantages of Gyansrota a repository are multifold like:

- Serving as a tangible indicator of the institution’s quality and demonstrates the scientific, societal, and economic relevance of its research activities, thus increasing the institution’s visibility, status, and public value
- Long-term preservation of the research output of DRDO
- Providing wider, faster, and simultaneous/multiple access within the DRDO community
- Sharing and reusing of knowledge asset of the organization
- An Increase in citations to one’s research because of the open access on Internet

Gyansrota is organised into a hierarchical set of communities, sub-communities, and collections:

- Communities: Form the top layer: i.e., DRDO HQs (91 records), DRDO Image Gallery (22 records), DRDO laboratories (2712 records), DRDO women (346 records), etc.
- Sub-communities: A division of the community i.e., Directorates, etc.
- Collections: Each sub-community can contain various collections. These are groups of documents related by content type, i.e., research articles, learning material, patents, etc.

The repository contains bibliographic metadata and the full-text of every document. Users can search across metadata, as-well-as the full-text of the documents, either at particular level or across the whole repository. Content can be browsed in a number of ways via communities/collections, titles, authors, dates and subject keywords. Thus navigation across the repository is user-friendly and presentation is in a lucid manner.

DRDO is a huge multi-laboratory organisation with diverse R&D activities. The intellectual output of the organisation in terms of volume would be enormous. Thus, the IR has to be populated in a phased manner with contributions at all levels, right from the author, the management, the information personnel (TIC/TIRC), and the repository team. Being an author is a matter of pride as it involves knowledge generation. Knowledge needs to be propagated to spread awareness and increase its value. To make one’s contribution to research available in the repository, one can submit a soft copy of the same to its TIRC head/library in-charge with all bibliographical details which will then be forwarded to the repository team at DESIDOC for inclusion in the IR.

DESIDOC has recently hosted beta-version of DRDO IR on Internet. Currently it contains 2712 full text articles published by DRDO scientists and biographies of eminent scientists of DRDO.
4 Reasons for contributing to IR
❖ Helps to boost image within institute
❖ Helps to boost external recognition
❖ Facilitates subject content to be known to outside world
❖ It is compulsory in an institution
❖ Results in financial benefit/promotion
❖ Helps in making useful contacts outside
❖ Opens up possibility of doing pedagogical research in subject area

5 Reasons for not contributing to IR
❖ IR is a recent development and user/author is not aware of its existence
❖ Like to keep my material on my website
❖ Do not have time to contribute my material to IR
❖ Do not know How and what to contribute?
❖ Do not want anyone else to use my materials
❖ Like to want my materials to be used by certain group only
❖ Wish to have control on my intellectual property

6 Most Common Challenges & Constraints in India
The problems and hurdles which implementation teams face in building a repository (7) include the following:
❖ Nature of content: Classified/restricted and Unclassified/Open
❖ Lack of awareness
❖ Ignorance of users in the absence of appropriate promotion program
❖ Poor bandwidth
❖ Inadequacy of generation of digital resources (Slow digital preservation)
❖ Poor adoption rate by academics
❖ Non-availability of telecommunication infrastructure
❖ Difficult to have control over the quality of the content to digitise
❖ Absence of a well defined contents related institutional policy
❖ Lack of IR expertise
❖ Insufficient funds for IT infrastructure and manpower
❖ Apathy of authors towards time consuming procedure.
❖ Difficulties in managing intellectual property rights
❖ Problems related to customization of open source software is a bottle neck

7 Training and User Support for IRs
Library staff needs training about:
Software Installation & customization
General procedures, understanding the service goals, etc.
User interface, adding content
Metadata procedures
Search methods

Users/authors need training about:
- General procedures, understanding the service goals, etc.
- User interface, adding content
- Metadata creation

8. **Best Practices for Promoting IRs**

In order to promote the IRs in India one should (Fernandez, 2006):
- Get support from the top management
- Show value of IR to authors
- Provide IR access statistics to stakeholders
- Create public opinion for mandating deposits
- Increase awareness and training through follow-up workshops
- Providing online support via listserv
- Brand IR efforts under a logo
- By advertising its services on its website and in print
- Make IR launch a high profile event
- Develop FAQs and online power point presentations
- Provide better visibility by registering IR with ROAR and OpenDOAR
- Finally be proactive in publicizing repository developments via institutional newsletters & bulletins, seminars & workshops and email alerts etc

9. **What does success mean for an IR?**

Indicators of success for an institutional repository include the following (Fernandez, 2006):

9.1 **Submissions**
- Number of submissions - a high number of submissions (i.e. digital content that is contributed to the institutional repository by its creator or producer)
- Frequency of submissions - the occurrence of submissions is continuous over time and/or there are increasing submissions from recurring producers
Type of submitter – broad representation of constituents (e.g. this might mean that faculty at all
levels – staff, graduate students and undergraduate students – in most or all departments submit
content)

Participation of key stakeholders – for example, submissions by senior faculty or documentable
support from institutional or other funders of the institutional repository.

9.2 Use

- Number of users – many users of the institutional repository, both new and recurring
- Type of content used – use of the majority of the content in the institutional repository rather than
  use of only a small portion
- Nature of use – content in the institutional repository is routinely cited in reports and publications

9.3 Support

- Constituent support – depositors and users express satisfaction with the institutional repository.
- Financial support – the institution provides ongoing, and preferably increasing, support.
- Technical support – there is adequate support and interest in the development and enhancement
  of the infrastructure, software and tools required by the institutional repository.

The above are just some of the possible metrics for success that might be considered. To demonstrate
success, an organization that manages an institutional repository would have to either promote or docu-
ment a perception within the institution that an institutional repository is successful or establish a means
to define and measure the success of an institutional repository.

10. Conclusion

Promotion of open access and IR in India has been largely due to the efforts of Leslie Chan, Barbara
Kirsop, Subbiah Arunachalam and the late T.B. Rajasekhar and Organizations/Universities regularly orga-
nizing workshops to trend LIS professionals to set up IRs. This paper highlights the Indian initiatives in
the field of institutional repositories. It provides an overview of the 69 registered archives of Indian
institutions in a range of subject disciplines. The authors believe that institutional repositories will help in
the sharing of institutional intellectual output and will increase article citations and the impact factors of
Indian journals.

Institutional Repositories (IRs) offer the opportunity for libraries to collect and preserve and disseminate
the institutions scholarly output. Serving an important service to the community, institutional repositories
offer many benefits to the institutions community as well as other people and communities around the
world. Institutional repositories make it possible to collect content in one location, capture and provide
open access to the intellectual output of a university, as well as preserve content that may be otherwise unavailable or out of publication. It is essential to explore the benefits as well as the challenges of institutional repositories to make sure it is worthwhile to the library as well as the institution.

Low self-archiving rates have dampened hopes that IRs would have an impact on scholarly publishing models. Preservation programs, a stated goal of many IRs, are often not well established. In many cases, IRs is not part of a larger vision for services the library can provide to the institution, but are isolated projects without a strong base of support.

As DRDO the major initiatives in the area of establishment of IR are taken by ADE, GTRE, LRDE and MTRDC at Bangalore, ARDE, DIAT and R&DE (E) at Pune, CVRDE, Chennai, DFRL, Mysore, NPOL, Kochi, SASE, Manali and the mother of all DRDO Institutional Repository- Gyansrota by DESIDOC, Delhi. Since DRDO deals with sensitive subject area of defence, nearly all the IRs of DRDO labs/estts are on Intranet, which is accessible only to DRDO employees. Other 11 DRDO labs/estts are planning to establish IR in the near future.

### Table 2: List of IRs in India (as on 1st Nov 2009)

<table>
<thead>
<tr>
<th>SN</th>
<th>Host Organisation/ University</th>
<th>Web Address</th>
<th>No. of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ADE (DRDO) Bangalore</td>
<td>Hosted on Intranet</td>
<td>267 approx.</td>
</tr>
<tr>
<td>2.</td>
<td>ARDE, DRDO</td>
<td>Hosted on Intranet</td>
<td>40718</td>
</tr>
<tr>
<td>3.</td>
<td>Bangalore Management Academy</td>
<td><a href="http://bma.ac.in:8080/DSpace/">http://bma.ac.in:8080/DSpace/</a></td>
<td>685</td>
</tr>
<tr>
<td>5.</td>
<td>Bharathidasan University Library, Trichy</td>
<td><a href="http://172.16.1.10:8084/DSpace/">http://172.16.1.10:8084/DSpace/</a></td>
<td>NA</td>
</tr>
<tr>
<td>8.</td>
<td>Central Institute of Medicinal &amp; Aromatic Plants, Lucknow</td>
<td><a href="http://kr.cdir.res.in/index.jsp">http://kr.cdir.res.in/index.jsp</a></td>
<td>121</td>
</tr>
<tr>
<td>9.</td>
<td>Cochin University</td>
<td><a href="http://dyuthi.cusat.ac.in/DSpace/">http://dyuthi.cusat.ac.in/DSpace/</a></td>
<td>1912</td>
</tr>
<tr>
<td>10.</td>
<td>CVRDE (DRDO) Chennai</td>
<td>Hosted on Intranet</td>
<td>217 approx.</td>
</tr>
<tr>
<td>12.</td>
<td>Delhi University</td>
<td><a href="http://EPrints.du.ac.in/">http://EPrints.du.ac.in/</a></td>
<td>178</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Hosted on Intranet</td>
<td>DSpace URL</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------------------------------------</td>
<td>--------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>DFRL, (DRDO) Mysore</td>
<td>Hosted on Intranet</td>
<td><a href="http://drt.isib.ac.in/">http://drt.isib.ac.in/</a></td>
</tr>
<tr>
<td>16</td>
<td>DRTC, Bangalore</td>
<td></td>
<td><a href="http://dspace.library.iitb.ac.in/DSpace/">http://dspace.library.iitb.ac.in/DSpace/</a></td>
</tr>
<tr>
<td>17</td>
<td>GB Pant University of Agriculture &amp; Science, Pantnagar</td>
<td></td>
<td><a href="http://dspace.library.iitb.ac.in/jspui/">http://dspace.library.iitb.ac.in/jspui/</a></td>
</tr>
<tr>
<td>18</td>
<td>GTRE (DRDO) Bangalore</td>
<td>Hosted on Intranet</td>
<td><a href="http://dspace.library.iitb.ac.in/jspui/">http://dspace.library.iitb.ac.in/jspui/</a></td>
</tr>
<tr>
<td>19</td>
<td>Guru Gobind Singh Indraprastha University, Delhi</td>
<td></td>
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<tr>
<td>20</td>
<td>ICFAI Business School (IBS), Hyderabad</td>
<td></td>
<td><a href="http://202.131.96.59:8080/DSpace">http://202.131.96.59:8080/DSpace</a></td>
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<tr>
<td>21</td>
<td>IGNOU, New Delhi</td>
<td></td>
<td><a href="http://www.egyankosh.ac.in/">http://www.egyankosh.ac.in/</a></td>
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<td>22</td>
<td>IIT Delhi</td>
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<tr>
<td>24</td>
<td>IIT Mumbai</td>
<td></td>
<td><a href="http://dspace.library.iitb.ac.in/jspui/">http://dspace.library.iitb.ac.in/jspui/</a></td>
</tr>
<tr>
<td>25</td>
<td>Indian Institute of Management Kozhikode (IIMK)</td>
<td></td>
<td><a href="http://EPrints.iimk.ac.in/">http://EPrints.iimk.ac.in/</a></td>
</tr>
<tr>
<td>26</td>
<td>Indian Institute of Science, Bangalore (Electronic Theses and Dissertations)</td>
<td></td>
<td><a href="http://etd.ncsi.iisc.ernet.in/">http://etd.ncsi.iisc.ernet.in/</a></td>
</tr>
<tr>
<td>27</td>
<td>Indian Institute of Science, Bangalore, India</td>
<td></td>
<td><a href="http://EPrints.iisc.ernet.in/">http://EPrints.iisc.ernet.in/</a></td>
</tr>
<tr>
<td>28</td>
<td>Indian Institute of Astrophysics, Bangalore</td>
<td></td>
<td><a href="http://prints.iiap.res.in/">http://prints.iiap.res.in/</a></td>
</tr>
<tr>
<td>29</td>
<td>Indian Institute of Information Technology, Allahabad</td>
<td></td>
<td><a href="http://EPrints.iiita.ac.in/">http://EPrints.iiita.ac.in/</a></td>
</tr>
<tr>
<td>30</td>
<td>Indian Institute of Management, Kozhikode</td>
<td></td>
<td><a href="http://DSpace.iimk.ac.in/">http://DSpace.iimk.ac.in/</a></td>
</tr>
<tr>
<td>31</td>
<td>Indian National Science Academy, New Delhi</td>
<td></td>
<td><a href="http://61.16.154.195/dspace/">http://61.16.154.195/dspace/</a></td>
</tr>
<tr>
<td>32</td>
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