HITLIB NEWS

Vol. 3 No.1, April. 2013

Harare Institute of Technology
success through innovation

Editorial

It is our sincere hope that you continue to be informed, educated and entertained by our newsletter the HITLib News. The year 2012 is already yester-year. Now it is 2013, and we are already three months into the year and you must be wondering when your next HITLib meal will be. Well, stop wondering for the table is already set. Enjoy HITLib News Volume 3 Number 1, April 2013.

Scholarly research and communication is probably one of the reasons institutions of higher learning exist. It is important for these institutions to engage seriously in scholarly research and communication and reach out to as wide an audience as possible. This way, the institutions would definitely become very visible on the global research and communication arena. The need to measure one's contribution to the whole global knowledge resource base becomes essential. This is made possible by using an Institutional Repository as a tool to collect and put together all its intellectual output which will indeed reflect and measure its research activities at any one time. HITScholar at the Harare Institute of Technology becomes an academic tool that its Schools and Departments should use to measure their contribution to the HIT intellectual output. The schools and departments too will not only be visible in the Institute but on the global research and communication arena. Through the HITScholar, HIT will enhance its visibility and become a force to reckon with on the global research and communication map.

Submit your published/unpublished research findings, conference papers, workshop and seminar presentations to the HITScholar and contribute to your individual visibility and recognition. Let us make HIT the institute of technology that it is by engaging seriously in research and communication activities that stimulate scholarship in innovation locally and on the global arena.

Driving Awareness and Adoption of HITScholarly in HIT

Role of IR in Scholarly Research and Communication

Introduction

Development of Institutional Repositories (IR) has largely been taking place in universities due to invisibility, limited access and reduced impact that occurs due to the inability of many university libraries to sustain rising subscription costs of journal publications in which most of their research findings have been published. IRs are thus being created to manage, preserve and maintain universities' intellectual output and in the process increase visibility, widen access and raise impact of research findings. Librarians are taking leadership roles in planning and building these repositories, thus, fulfilling their roles as experts in collecting, describing, preserving, and stewarding printed documents and digital information.

Definition of an Institutional Repository

Various definitions of Institutional Repositories have been put forward. The frequently cited definition is that of Lynch (2003) which states that an IR is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. Johnson (2002) also concurs with Lynch when he pointed out that the creation of the intellectual product is done by y the faculty, research staff, and students of an institution and that the material so created is made accessible to end-users both within and outside of the institution with few if any barriers to access. Western Kentucky University viewed an Institutional Repository as a digital research repository, dedicated to scholarly research, creative activity and other full-text learning resources that merit enduring and archival value and permanent access within a centralized database that supports, reflects, and showcases the intellectual life of the University through easy searching and retrieval, and universal access and indexing.

Role of an Institutional Repository

The purpose of institutional repositories as alluded to earlier on is to manage, preserve and maintain universities'/institutions' intellectual output and histories to achieve the following objectives:

·To provide open and unfettered access to institutional research output;

·To create global visibility for the institution's research output;

·To collect and place scientific research content in a single and centralized location; and

·To store and preserve other digital assets including unpublished (grey) literature such as theses and dissertations

New communication model

Institutional repositories form part of a global system of distributed, interoperable repositories. Such repositories provide the foundation for a new disaggregated model of scholarly publishing that is unbundling the vertically integrated publishing model which currently characterize academic journal publishing. Institutional repositories are altering the structure of this model by providing a new communication model which is surely eliminating publisher advantages within the market, thus ushering in a new scholarly publishing paradigm. It has been an uphill task though, as large journal publishers appeared to have both the power and the incentive to maintain the status quo. (Johnson,2002)

Institutional Visibility and Prestige

Institutional repositories complement existing metrics for measuring institutional productivity and prestige by concentrating the intellectual product created by the institution's researchers, making it easier to demonstrate its scientific, social and financial value. Thus the institute's visibility is more increased than when faculty publishes in high tier journal publications which by developing countries' standards are expensive to acquire resulting in limited visibility of the faculty and the institution too. By capturing, preserving, and disseminating an institution's collective intellectual capital, an institutional repository serves as a meaningful indicator of the institution's academic quality. Where this increased visibility reflects a high quality of scholarship, this can translate into tangible benefits such as collaborative research projects internally and externally or even funding from both public and private sources. It can also be noted here that authors of the research articles will also receive increased recognition.

Academic journal publishing model has been found to limit the readership and availability of most scholarly research due to high subscription costs. Subsequent subscription cancelling will only help to reduce readership further. Where readership and availability are compromised by high costs, institutional repositories can be created and function to increase awareness of an institution's output. This function can be implemented on individual campuses or in collaborative consortial projects.

Enhancement of Access and Impact factor of research articles

Subscriptions and the ever increasing rates of them (approaches publishers appear to use to retain monopoly) restrict circulation of journal articles to a point where access becomes difficult and the impact factor of articles heavily weighed down. In many cases researchers find it difficult to access the literature they have produced themselves. An institutional repository will provide an open access to the institute's intellectual output to faculty, students and staff within the institute and also to outsiders through its mandate to create a global visibility of the institute's research output. Thus access is opened up to a wider audience and research articles will be more visible and also start to have attention thereby increasing the impact factor.

Marketing Showcase

Institutional repositories can be used to showcase the institution's intellectual output to potential local and international students and staff who may bring along the much needed funding, new skills and schools of thought.

Universal access

An article published in a journal may be available to only a few hundred subscribers, but the same article when also posted in a repository it will be available to all and that greatly enhances the public value of research.

Wide range of content

Repositories collect more than just journal publications; they also collect other types of materials, such as conference proceedings, images, and sometimes research data thus allowing integration and provision of access to a wide range of materials.

Students benefit, too

Since no library can afford to subscribe to all the resources students need, putting works in an institution or digital repository ensures students everywhere can read and learn from them, thus creating an important new layer of information that is readily accessible. Those students, who are early adopters of open approaches also benefit from digital repositories by depositing their theses and dissertations — broadening the reach of these important works.

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HIT Library Outreach Service Goes a Gear Up

The HIT Student Union's Vimbainesu Children's Home (VCH) Project has received a timely boost of a consignment of books sourced by the Library's Outreach Services. The Library, through its outreach service program, made a commitment to revamp the VCH library to compliment the efforts of the HIT Student Union's VCH Project. The HIT Library is assisting the Students Christian Union to restock and revamp the library at the VCH.

The consignment of books that was handed over to the Home's Matron consisted of 64textbooks and novels that are appropriate for early childhood learning, primary and secondary school levels. Some of the subjects covered by the consignment include Mathematics, Chemistry, Physics, Biology and English Literature. English Language dictionaries were also part of the consignment. The consignment was put together from a personal donation of 9 books that was made by the Institute Librarian and 55 books also solicited from Book Aid International by the Librarian on behalf of the Children's Home.

The HIT Library is appealing to all members of the HIT Community, both students and staff, to donate books from their personal collections, from friends' collections or to dig deep in your pockets and purchase books for the VCH Project. You may submit your book donations to the Library's Outreach Librarian, Mr J C Mbirizah. He can be contacted on 741422-36 Ext 2179 or email: joembirizah@hit.ac.zw/ joe99mbirizah@gmail.com The Library will acknowledge all donations made. Together we can make a difference in the lives of the children at Vimbainesu. Mr Maenzanise has already set an example for us. Donate and feel happy about it!!

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Aristotle with HIT Library at Heart

CHINDEZWA, Aristotle, is a first year Financial Engineering student at HIT. He once attempted a degree in Civil Engineering with the University of Zimbabwe and realised that he was not going to fulfill his ambition and aspiration of becoming a Financial Engineer. He decided to come to the HIT and enrolled into a career he was passionate about. He said his career projections were in risk management and would love to set up an organisation whose primary focus would be to develop tools aimed at training financial literacy at high school level. ARISTOTLE observed, "Children who grow up with financial literacy are able to make financial decisions from tender ages and end up developing and cultivating a culture of starting their own businesses and have the financial background knowledge of nurturing those projects to greater heights due to the acquired entreprenuerial and innovation skills". This will be motivated by a properly and professionally functioning economy being nurtured by financially literate citizens. Mr Chindezwa, true to the Aristotelian virtue ethics and in line with HIT values of integrity and honesty, he then decided to donate 24 personal books in the Civil Engineering discipline to HIT Library for use by fellow students at HIT. To him, it made much sense to share this knowledge with colleagues in the respective disciplines instead of leaving the books to lie idle at home or selling them. He got some of the books from his brother who had studied Electrical Engineering at UZ, some from a church colleague and others from his own personal library collection. He expressed joy and satisfaction when he handed over the books. He believed the books would be put to good use hence the decision to donate to the library. Here is one student who openly showed a golden heart for the Library and for other fellow students. The Library Management Committee was moved and chose Aristotle and four other students to become library service ambassadors to fellow students. The five would assist library staff in marketing library services to other students in the Institute. The chosen five are currently being taught how to systematically search and retrieve relevant information from e-resources subscribed at HIT and also from the Open Sources.

Below is the list of books donated to the Institute by Aristotle

1. Babani, B.B. (1975) 79 Electronic novelty circuits. London: Babani Press

2. Babani, B.B. (1975). First book of practical electronic projects. London: Babani Press.

3. Babani, B.B.(1975). Audio enthusiasts handbook. London: Babani Pressx 1

4. Babani, B.B.(1975).Practical stereo and quadrophony handbook. London: Babani Press

5. Bamber, B.(1956). The design of towers, masts and pylons. Onslow Hall: Draughtsmen's and Allied Technicians Association

6. Babani, B.B. (1975). 38 Practical tested diode circuits for the home constructor. London: Babani Press.

7. Babani, B.B. (1975) First book of Transistor Equivalents and Substitutes. London: Babani Press.

8. Babani, B.B. (1975)Practical transistorized novelties for hi-fi enthusiasts. London: Babani Press.

9 .Babani, B.B. (1974) Second book of transistor equivalents and substitutes. London: Babani Press.

10. Waterworth, G.(1982) Electrical Principles for Technicians, Vol 2. London: Edward Arnold

11. Ramshaw, Raymond. (1973) Power electronics: thyristor controlled power for electric motors. London: Chapman and Hall Ltd

12. Worcester, Roland. (1969) Electronics. London: Hamlyn Publishing Group

13. Clayton, G.B. (1974). Operational amplifers. London: Butterworths.

14. Electrical contracting and management. London: Butterworth Group (1973).

15. Morling, K. (1974). Geometric and engineering drawing, 2nd ed. London: Edward Arnold.

16. McGee, Henry. A. (1991) Molecular engineering. New York: MaCgraw-Hill.

17.Floyd, Thomas. L. (1984) Electronic devices. Columbus: Charles E Merrill Publishing.

18. Brown, Robert . M. (1973) 104 Easy projects for the electronics gadgeteer. Slough Bucks:Foulsham-Tab

19. Seely, Samuel. (1956) Radio electronics. New York: McGraw- Hill.

20. Chudley, R .(1987) Construction technology, vol 1, 2nd ed. Harlow: Longman.

21 Chudley, R. (1987) Construction technology, vol 2, 2nd ed. Harlow: Longman

22 Chudley, R. (1987) Construction technology, vol 3, 2nd ed. Harlow: Longman

23. Chudley, R. (1987) Construction technology, vol 4, 2nd ed. Harlow: Longman

24. I.C.S Staff (1957) Mechanics Part 5, instruction manual with examination questions, 5th ed. London: International Correspondence Schools.

A GREAT THANK you goes to Mr Aristotle Chindezwa for his selflessness and commitment to serve other mankind.

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HIT Library Widens the Research Base

Open Access (OA) is the practice of providing unrestricted access via the Internet to peer reviewed scholarly articles, and scholarly books.

"Open access publications are freely and permanently available online to anyone with an internet connection. Unrestricted use, distribution and reproduction (of OA materials) in any medium is permitted, provided the author/editor is properly attributed. Open access has gained tremendous support from both authors, who appreciate the increased visibility of their work, as well as science institutions and funders, who value the societal impact of freely available research results." {SpringerOpen}

Open Access Sites

The following are sites are a must visit by our students, lecturers and researchers. We encourage you to make the most out of them. You will not regret it! Other than accessing and making use of OA knowledge and information resources from other scientists, scholars and researchers, the HIT Library strongly urges the HIT scientists, technologist and engineers to also consider seriously to generate, publish and distribute your own knowledge and information using this mode of scholarly communication. The benefits with this mode of scholarly communication are tenfold as highlighted in the preceding sections.

Bookboon *(www.bookboon.com)*

Bookboon's free online textbooks for students are focused and to the point. It covers over (1 000 000?) ebooks and documents that are all written by highly respected professors from top universities in the world and cover topics such as Economics, Statistics, IT, Engineering and Natural Science.

Library-Genesis *(www.library-genesis.com)*

Search more than 3,010,433 ebooks indexed by the Library Genesis Project. Library Genesis helps you find millions of free ebooks {mostly in EPUB, PDF, DJVU,

Bentham Open
(www.benthamscience.com)

Bentham Open publishes over 230 peer-reviewed open access journals. These free-to-view online journals cover all major disciplines of science, technology, medicine and social sciences. Below is a testimony by Richard Reithinger [Westat, USA].

"*Open access journals have transformed the way scientific data is published and disseminated: particularly, whilst ensuring a high quality standard and transparency in the editorial process, they have increased the access to the scientific literature by those researchers that have limited library support or that are working on small budgets*."

SpringerOpen
(www.springer.com/open+access?)

SpringerOpen titles cover all disciplines within the science, technology and medicine. The entire content of SpringerOpen journals –including research articles, reviews, and editorials- are fully and immediately open access, and are accessible to anyone with internet connection. No subscription is needed.

Directory of Open Access Books
(www.doabooks.org)

DOAB is a discovery service for peer reviewed books published under an Open Access license. It provides a searchable index to the information about these books, with links to the full texts of the publications at the publisher's website or repository. DOAB is aimed at increasing discoverability of Open Access books. To facilitate the discovery academic publishers provide harvestable metadata of their Open Access books to DOAB. Harvestable metadata maximizes dissemination, visibility and impact of the books. Over 20 publishers are currently participating with about 750 Open Access books. This is indeed a valuable resource for the scholarly community and interested public. Check it out without delay!!

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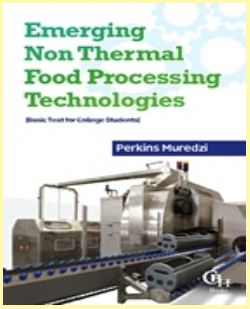
Book review: Emerging Non-Thermal Food Processing Technologies/ P Muredzi



That students studying food processing technology in universities and colleges and also players in the food industry need literature on especially non-thermal food processing technologies in order to understand and embrace the new principles behind this new technology was, in no doubt, in the author's mind when he set to produce this marvelous piece of work. The book, "Emerging non-thermal food processing technologies" by Dr Perkins Muredzi could not have come at a better time than now when the food industry is undergoing transformation as a result of emerging new processing technologies. Ten chapters on food processing technologies have been logically put together to produce this comprehensive piece of work critical in the food industry. Readers of this book will find a very helpful list of references at the end of each chapter which they can use to retrieve more information and broaden their knowledge of the issues discussed. The author must also be given credit for the carefully selected, varied and coloured illustrations used in the book. Illustrations help readers to understand issues better.

A must read text for college students arranged as follows-:

Chapters

1. High Pressure Processing
2. Pulsed Electric Field Processing
3. Food Irradiation
4. Pulsed Light Processing Technology
5. Ultrasound Processing Technology
6. Oscillating Magnetic Fields Processing Technology
7. Ozone
8. Microwave Radio Frequency Processing
9. Gas, Cold Plasma Technology
10. Overarching Principle: Kinectics and Pathorgens of Concern for all I Alternative Food Processing Technologies.

This is what the Vice Chancellor Harare Institute of Technology, Eng. Q. C Kanhukamwe had to say about the book in his Foreword, "Technology Institutes serve as beacons of knowledge generation that help society develop new improved methods of industrial production ushering in economic development and quality of products and services. Thermal processing is very effective technology for microbial inactivation, however, excessive heat treatment may cause undesirable effects on foods such as protein denaturalization, non-enzymatic browning, and loss of vitamins and volatile flavours. In order to reduce the negative effects of heat treatments in foods, alternative technologies capable of inactivating micro-organisms at temperatures below those used during thermal processing are being demanded by the food industry. Non-thermal food processing techniques are receiving considerable attention because of their potential for quality and safety improvement of food. This book by Dr. Muredzi is most vital in availing information on new techniques in food processing that is sought after by students studying in various food science and technology programmes in institutions of higher learning and can also be used as reference literature for industrialists and scholars. This first edition sets the tone for future editions and is recommended for use by students studying food science and technology and related disciplines.

About

Dr Perkins Muredzi

Emerging from HIT Community of researchers is yet another prolific author of a book, 'Emerging non-thermal food processing technologies', a must read for all university and college students as well as players in the food industry.

Dr Muredzi is a Zimbabwean national who holds two Master degrees in Food Processing Engineering (Msc Eng.) and Intellectual Property (MIP). He is also a proud holder or a PhD in Food Science and Technology from the Atlantic International University obtained 2012. Dr Muredzi is a publisher, an active researcher in food processing technology and a member of IUFost, EFFoST and IFT. Currently he is the Executive Dean of the School of Industrial Sciences and Technology at Harare Institute of Technology,