



Informatics: A Dynamic Discipline with Impact on all Spheres of Human Activity

Ramina Mukundan

Abstract

The article on 'informatics' in Wikipedia gives only a list of subjects that form part of informatics and has no details as of now. The present article attempts to define informatics, survey the subject areas that informatics as a subject encompasses, the role and position of the subjects that integrates into the discipline of informatics, and the emerging fields of specialization under informatics. It is intended to provide an outline of the areas that the journal - *Informatics Studies* - can cover as well as to give an idea to those who deal with knowledge and information management about the rapidly expanding borderlines of this emerging discipline which remains so close to their profession.

Introduction

Man has always been attempting to unravel the mysteries of nature. His desire to experiment and explore, communicate and conquer has motivated him to discover and invent. As a consequence, his attitude to life and his standards of living have been constantly changing, indirectly causing socio-economic changes. Science and Technology slowly started giving a new dimension to his living style and life process. The last century and in particular, the last few decades ushered in new discoveries. The pace of advancement was very fast which necessitated conservation and management of knowledge already generated, its continuous updating, facilitating its dissemination, access and processing.

So knowledge and information remained the most important constituent that enabled progress since the origin of man. The word 'informatics' is mnemonic to information

or some processes or techniques related to it. Information being the important constituent of progress, techniques and technologies for its management was also present in our society from the dawn of civilization. The techniques and approaches of information management are well tried and have evolved over centuries. Both the primitive man who made pictures on his cave wall and our colleague who burn pits using laser in the spiral path of silver disks have the same objective of recording and storing knowledge for the benefit of the society; the future generations. Along with the advancement of technology spectacular changes have occurred in the medium for storing and distributing knowledge. It changed from the static cave wall and through movable Sumerian Stone tablets and Indus valley seals, metal sheets, leather, dried leaves, papyrus, cloth, audio and video tapes, micro fiche and the like to the present UFO disk with a shape very similar to the Sumerian

stone tablet but having unlimited space to record knowledge. With computers in the market, his thought process, decision-making and skills got updated. The field of 'Information Technology' saw newer horizons and his pursuits and achievements in this direction were amazing.

Definition and Nature of Informatics

In 1957 the German computer scientist Karl Steinbuch coined the word Informatik from information + -ics; possibly influenced by automation and automatic to mean 'Informatics: Automatic Information Processing'. The term was coined as a combination of 'information' and 'automatic' to describe the science of automating information interactions. The morphology-informat-ion + -ics - uses 'the accepted form for names of sciences, as conics, linguistics, optics, or matters of practice, as economics, politics, tactics', and so, linguistically, the meaning extends easily to encompass both the science of information and the practice of information processing.

This new term was adopted across Western Europe, and, except in English, developed a meaning roughly translated by the English 'computer science', or 'computing science'. Scientists from the field advocated the Russian term 'informatika' (1966), and the English 'informatics' (1967), as names for the theory of scientific information, and argued for a broader meaning, including study of the use of Information Technology in various communities (for example, scientific) and of the interaction of technology and human organizational structures.

Informatics came to be accepted as a discipline of science, which investigates the structure, and properties (not specific content) of scientific information, as well as the regularities of scientific information activity, its theory, history, methodology and organization.

Usage has since modified the definition in three ways. First, the restriction to scientific information is removed, as in Sanskrit informatics or legal informatics. Second, since most information is now digitally stored, computation is now central to informatics. Third, the representation, processing and communication of information are added as objects of investigation, since they have been recognized as fundamental to any scientific account of information. Taking information as the central focus of study, then distinguishes informatics, which includes study of biological, social and linguistic mechanisms of information processing, from computer science, where digital computation plays a distinguished central role. Similarly, in the study of representation and communication, informatics is indifferent to the substrate that carries information. For example, it encompasses the study of communication using gesture, speech and language, as well as digital communications and networking.

The University of Edinburgh in 1994 introduced a broad interpretation of informatics, as 'the study of the structure, algorithms, behaviour, and interactions of natural and artificial computational systems,' in 1994. Wikitionary defines informatics as 'a branch of information science, and of computer science, that focuses on the study of information processing, particularly in respect to systems integration and human interactions with machine and data'.

Based on the above, definition of informatics can be refined as 'a discipline of science: that focuses on the study of access, collection, organization, processing, conservation, retrieval and dissemination of information, that investigates the structure and properties of information, its computer based processing, human interaction with machine data, regularities of information activity as well as the theory, history and methodologies concerned.

Contributing Disciplines of Informatics

The main aspect of informatics is to study the nature of information in all its forms, which leads to the classification, organization, representation, storage, retrieval, understanding and use of information. Therefore, developing information processing models of biological, physical, economic and social aspects of the world would provide us with a better understanding of some situations or phenomena, giving us the power to solve problems that could not be solved before.

Different modes of formation of subject can be identified in the evolution of informatics. Informatics and its various sub disciplines have developed through the mode of fusion in which two or more subjects are fused in such a way that each of them loses its individuality to form a compound subject, which is the fused main subject. Examples are Biochemistry, Bio informatics, and Health Informatics. And through distillation mode Informatics has evolved as a main subject, out of the experiences in the appearance and action in diverse compound subjects going with most basic subjects or occasionally even with host compound subjects.

Informatics is a subject, which consists of various aspects of computer science, information science, information technology, knowledge management, statistics, philosophy, linguistics, ontology and other disciplines concerned with knowledge/information management.

Computer Science

Computer science is the study of complex systems, information and computation using applied mathematics, electrical engineering and Software engineering techniques. Computer science has made a number of fundamental contributions to science and society - in fact, along with electronics, it is a founding science of the

current epoch of human history called the 'Information Age' and a driver of the Information Revolution, seen as the third major leap in human technological progress after the Industrial Revolution and the Agricultural Revolution. Its contributions that are highly relevant to Informatics are 'digital revolution' which includes the current Information Age and the Internet. Major areas of computer science listed in Wikipedia are the following:

Theoretical computer science: Theory of computation, information and coding theory, algorithms and data structures, programming language theory, and formal methods.

Applied computer science: Artificial intelligence, computer architecture and engineering, computer graphics and visualization, computer security and cryptography, computational science, computer networks, concurrent, parallel and distributed systems, databases and information retrieval, software engineering

Information Science or Information Studies

Information Science is an interdisciplinary field primarily concerned with the analysis, collection, classification, manipulation, storage, retrieval, and dissemination of information. Practitioners within the field study the application and usage of knowledge in organizations, along with the interaction between people, organizations and any existing information systems, with the aim of creating, replacing, improving, or understanding information systems. Information science cannot be considered as a branch of computer science. It is actually a broad, interdisciplinary field, incorporating not only aspects of computer science, but often diverse fields such as archival science, cognitive science, commerce, communications, law, library science, museology, management, mathematics, philosophy, public policy, and the social

sciences. 'Information science can be defined as a discipline that investigates the properties and behaviour of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability'.

The following are some of areas which information science investigate and develop.

Information Architecture

Information Architecture (IA) is the art and science of organizing and labelling websites, intranets, online communities and software to support usability. It is an emerging discipline and community of practice focused on bringing together principles of design and architecture to the digital landscape. Typically it involves a model or concept of information, which is used and applied to activities that require explicit details of complex information systems. These activities include library systems and database development, web sites, networks and search mechanisms.

Information Management

Information Management (IM) is the collection and management of information from one or more sources and the distribution of that information to one or more audiences. This sometimes involves those who have a stake in, or a right to that information. Management means the organization of and control over the structure, processing and delivery of information. Earlier this was largely limited to files, file maintenance, and the life cycle management of paper-based files, other media and records. With the proliferation of information technology the job of information management took on a new light, and also began to include the field of data maintenance. Information storage shifted to electronic means, became more and more complex and difficult. When information was disseminated across computer networks and by other electronic means, network managers, who look after

complex tasks, hardware and software in a sense, became information managers also.

In short, information management entails acquiring, organizing, securing, retrieving, and maintaining information. It is closely related to and overlapping with the practice of data management.

Knowledge Management (KM)

Knowledge management comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizations as processes or practices.

Many large companies and non-profit organizations have resources dedicated to internal KM efforts, often as a part of their business strategy, information technology, or human resource management departments. Knowledge management efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization. KM efforts overlap with organizational learning, and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and a focus on encouraging the sharing of knowledge. It is seen as an enabler of organisational learning and a more concrete mechanism than the previous abstract research.

Data Warehousing

Data warehousing is concerned with developing and maintaining subject oriented integrated non volatile, time variant, granular collection of data related to an organization in support of the organization. Present developments in the area are electronic data interchange (EDI), virtual systems and value added network (VAN)

Data Mining

Data mining is analysing massive quantum of data already warehoused to observe patterns, which may assist in decision making. It helps in extracting meaningful new patterns that cannot be found by merely querying or processing data or metadata in a data warehouse. Data mining is also closely connected to Knowledge Discovery process, which comprises cleansing, enrichment, transformation or encoding, discovery and presentation of the discovered information.

Information Retrieval

Information retrieval (IR) is the activity of obtaining information resources relevant to an information need from a collection of information resources. Searches can be based on metadata or on full-text indexing. An information retrieval process begins when a user enters a query into the system. Queries are formal statements of information needs, for example search strings in web search engines. In information retrieval a query does not uniquely identify a single object in the collection. Instead, several objects may match the query, perhaps with different degrees of relevancy. An object is an entity that is represented by information in a database. User queries are matched against the database information. Depending on the application the data objects may be, for example, text documents, images, audio, mind maps or videos. Often the documents themselves are not kept or stored directly in the IR system, but are instead represented in the system by document surrogates or metadata. Most IR systems compute a numeric score on how well each object in the database match the query, and rank the objects according to this value. The top ranking objects are then shown to the user. The process may then be iterated if the user wishes to refine the query.

Information Seeking

Information seeking is the process or activity of attempting to obtain information in both human and technological contexts.

Information seeking is related to, but different from, information retrieval (IR). Much library and information science (LIS) research has focused on the information-seeking practices of practitioners within various fields of professional work. Studies have been carried out into the information-seeking behaviour of librarians, academics, medical professionals, engineers, lawyers and others.

Information Access

Information access is an area of research at the intersection of informatics, information science, information security, language technology, computer science, and library science. The objective of the various research efforts in information access is to simplify and make effective for human users to access and further process large and unwieldy amounts of data and information. Technologies applicable to the general area are e.g. information retrieval, text mining, machine translation, and text categorization. In discussions on information policy, information access is concerned with ensuring free and open access to information. Information access covers many issues 12

open source, open access, privacy, and security.

Information Society

An information society is a society where the creation, distribution, diffusion, use, integration and manipulation of information are a significant economic, political, and cultural activity. The aim of an information society is to gain competitive advantage internationally, through using IT in a creative and productive way. The knowledge economy is its economic counterpart, whereby wealth is created through the economic exploitation of understanding. People who have the means to partake in this form of society are sometimes called digital citizens. Basically, an information society is the means of getting information from one place to another. As

technology has become more advanced over time so too has the way we have adapted in sharing information with each other. Information society theory discusses the role of information and information technology in society and the questions on key concepts shall be used for characterizing contemporary society, and how to define such concepts. It has become a specific branch of contemporary sociology.

Philosophy of Information

Philosophy of Information (PI) studies conceptual issues arising at the intersection of computer science, Information technology, and philosophy. It includes the investigation of the conceptual nature and basic principles of information, including its dynamics, utilisation and sciences, as well as the elaboration and application of information - theoretic and computational methodologies to its philosophical problems. The philosophy of information (PI) has evolved from the philosophy of artificial intelligence, logic of information, cybernetics, social theory, ethics and the study of language and information. Recent creative advances and efforts in informatics, such as semantic web, ontology engineering, knowledge engineering, and modern artificial intelligence provide fertile notions, new and evolving subject matters, methodologies, and models for philosophical inquiry. While informatics and computer science brings new opportunities and challenges to traditional philosophical studies, and changes the ways philosophers understand foundational concepts in philosophy, further major progress in computer science would only be feasible when philosophy provides sound foundations for areas such as bio informatics, software engineering, knowledge engineering, and ontology.

Intellectual Property (IP)

Intellectual property (IP) is a legal concept, which refers to creations of the mind for which exclusive rights are recognized. Under intellectual property law, owners are granted

certain exclusive rights to a variety of intangible assets, such as musical, literary, and artistic works; discoveries and inventions; and words, phrases, symbols, and designs. Common types of intellectual property rights include copyright, trademarks, patents, industrial design rights and in some jurisdictions trade secrets.

Information Technology (IT)

Information technology (IT) is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise. But now it is closely tied up with knowledge and information management. It is the area of managing technology and spans wide variety of areas that include but are not limited to things such as processes, computer software and hardware, information systems, programming languages, and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the domain space known as information technology (IT).

Communications Technology

It is the principles involved in how computer systems communicate with each other and the standards, protocols, and conventions that determine how such systems communicate and MISSING mechanisms. This generally involves data transfer from one computer to another through a telephone, physical cable, microwave relay or satellite link or a combination of them. Connection of computers is generally through the linking of workstations by cables in a *network*, through the public telephone service, the use of leased line or wireless.

Information and Communications Technology

Information and Communications Technology usually called ICT is the term

that encompasses all forms of technology used for creation, acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by microelectronics-based combination of computing and telecommunications. It is often used as an extended synonym for information technology (IT) but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), intelligent knowledge management systems and audio-visual systems in modern information technology. ICT consists of all technical means used to handle information and aid communication, including computer and network hardware, communication middleware as well as necessary software.

Ontology

In computer science and information science, ontology formally represents knowledge as a set of concepts within a domain, and the relationships between pairs of concepts. It can be used to model a domain and support reasoning about entities. In theory, ontology is a 'formal, explicit specification of a shared conceptualisation'. Ontology renders shared vocabulary and taxonomy, which models a domain with the definition of objects and/or concepts and their properties and relations. Ontologies are the structural frameworks for organizing information and are used in artificial intelligence, the Semantic Web, systems engineering, software engineering, biomedical informatics, library science, enterprise book marking, and information architecture as a form of knowledge representation about the word or some part of it. The creation of domain ontology is also fundamental to the definition and use of an enterprise architecture framework.

Language Technology

Informatics has a significant impact on linguistics, and vice versa. Informatics being

a major tool for knowledge management it is now very closely tied to research on the standardization of script according to Unicode and various aspects of languages. Language technology is often called human language technology (HLT) or natural language processing (NLP) and consists of computational linguistics (CL) and speech technology as its core but includes also many application-oriented aspects related to them. Language technology is closely connected to computer science and general linguistics. In machine learning, pattern recognition is the assignment of some sort of output value (or label) to a given input value (or instance), according to some specific algorithm. An example of pattern recognition is classification, which attempts to assign each input value to one of a given set of classes (for example, determine whether a given email is 'spam' or 'non-spam'). The language technology will also cover standards like Unicode. Unicode is a character coding system designed to support worldwide interchange, processing and display of the written texts of the diverse languages. It supports most of the ancient languages as well as scripts used in different stages of the development of classical languages.

Knowledge Organization

The term knowledge organization (KO) (or 'organization of knowledge', 'organization of information' or 'information organization') designates a field of study related to library and information science (LIS). In this meaning, KO is about activities such as document description, indexing and classification performed in libraries, databases, archives etc. These activities are done by librarians, archivists, and subject specialists as well as by computer algorithms. KO as a field of study is concerned with the nature and quality of such knowledge organizing processes (KOP) as well as the knowledge organizing systems (KOS) used to organize documents, document representations and concepts.

Bibliometric/Informetric Studies

Bibliometrics is a set of methods to quantitatively analyze scientific and technological literature. Alan Pritchard defined the term as ‘the application of mathematics and statistical methods to books and other media of communication’. Citation analysis and content analysis are commonly used bibliometric methods. While bibliometric methods are most often used in the field of library and information science, bibliometrics have wide applications in other areas. In fact, many research fields use bibliometric methods to explore the impact of their field, the impact of a set of researchers, or the impact of a particular paper. Bibliometrics are now used in quantitative research assessment exercises of academic output, which is starting to threaten practice-based research. Advanced countries are considering using bibliometrics as a possible auxiliary tool in its Research Excellence Framework, a process which will assess the quality of the research output of the universities of a country and on the basis of the assessment results, allocate research funding. Other bibliometrics applications include: creating thesauri; measuring term frequencies; exploring grammatical and syntactical structures of texts; measuring usage by readers

Other related discipline is **Informetrics**, which is the study of quantitative aspects of information. This includes the production, dissemination and use of all forms of information, regardless of its form or origin. As such, informetrics encompasses the fields of

- scientometrics, which studies quantitative aspects of science;
- webometrics, which studies quantitative aspects of the World Wide Web;
- cybermetrics, which is similar to webometrics, but broadens its definition to include electronic resources

Library Science

Library science and Information Studies are two closely related and often intersecting disciplines that deal primarily with the organization and retrieval of information.

Library Science is an interdisciplinary social science incorporating the humanities, law and applied science and studying topics related to libraries; the collection, organization and dissemination of information resources; and the political economy of information. Library science has also historically included archival science, although a conceptual distinction between libraries and archives has evolved over time.

Amongst the varied topics of study that fall within library science: how information resources are organized to serve the needs of select user groups; how people interact with classification systems and technology; how information is acquired, evaluated and applied by people in and outside of libraries as well as cross-culturally; how people are trained and educated for careers in libraries; the ethics that guide library service and organization; the legal status of libraries and information resources, and the applied science of computer technology used in documentation and records management. library science is constantly evolving, incorporating new topics like database management, information architecture and knowledge management.

Application of Informatics

Informatics has found applications in many academic and professional areas. Some disciplines have closely merged with informatics and have become its sub disciplines. Various sub areas/application of informatics listed by the Wikipedia are : archival informatics, bio informatics, bio image informatics, biodiversity informatics, business informatics, cheminformatics, community informatics, computational informatics, development informatics, disease informatics, ecoinformatics,

education informatics, engineering informatics, environmental informatics, evolutionary informatics, forest informatics, geo informatics, health informatics, consumer health informatics, imaging informatics, public health informatics, hydro informatics, irrigation informatics, laboratory informatics, legal informatics, materials informatics, medical informatics, music informatics, computational linguistics, Sanskrit informatics, neuro informatics, pervasive informatics, social informatics, technical informatics, translational research informatics etc.

Dynamic Continuum

Present research in Knowledge Management as well as information, library and archival sciences mainly concentrate on traditional systems and procedures and their automation. The journal Informatics Studies (IS) states its objective as 'to promote research on technologies that can transfer existing knowledge resources from traditional systems to future proof systems for the networked society as well as extension of access to it in an equitable way, which has become essential to keep research in the field technologically viable and relevant to society'.

The subjects it specified as its areas of concern are those coming under knowledge management, information science, library science, and archival sciences which may include new methods for the creation, organization, management, dissemination and exchange of information; scholarly communication, open access, emerging modes and genres of publication, policy issues like publishing/deposit mandates, impact of governmental or institutional policy, institutional and discipline-specific repositories, digital curation, special packages, language technologies, search and information retrieval mechanisms, world wide web, knowledge warehousing, knowledge mining, standards, information infrastructures, resource sharing, information economics, intellectual property

rights, skills, and training in concerned areas as well as interdisciplinary and international perspectives on these issues.

Ranganathan has remarked that universe of subjects is not static; it is a dynamic continuum. Its structure is therefore ever changing. It is potentially infinite; between any two points an indefinite number of new points may come up. And knowledge being multidimensional, the interconnections of ideas spread out in many directions, and usually a subject is a synthesis of such multi-connected and many directional ideas. As informatics and computers are influencing each and every sphere of activity numerous new subjects like Sanskrit informatics, music informatics, etc will go on emerging by dissection, denudation, lamination, distillation, partial comprehension and bundling of subjects. So all the areas specified above as well as newly emerging areas related to informatics can be the subjects dealt by Informatics Studies.

The sages of India and teachers of Red Indian tribes of South America and many ancient cultures have emphasized the inherent, though hidden unity of the phenomenal world. This mystic experience had occurred also to Francis Thomson who states in his *Mistress Vision* that:

All things by immortal power

Near or far, hiddenly, to each other linked are

That thou canst not stir a flower

Without troubling a star.

In the intellectual recorded universe of knowledge, this phenomenon of inextricable interrelation is denoted by the term 'Ekavakyata'. It emphasises that whatever the atomising mind might do, no subject can be developed without its calling for some development in every other subject sooner or later; in other words, the universe of knowledge is a continuum. The present organized research in series is producing a continuous cascade of new micro-thoughts,

each stimulating another in succession in every region of knowledge. The cascade makes the universe of knowledge a dynamic continuum.

References

Arvidson, F and Flycht-Eriksson, A. (2012). Ontologies. Retrieved: May 25, 2013. [http://www.ida.liu.se/~janma/SemWeb/ Slides/ontologies1.pdf](http://www.ida.liu.se/~janma/SemWeb/Slides/ontologies1.pdf).

Bavadkar Et al (1967). Role of development of universe of subjects and the design of scheme of classification. DRTC Annual Seminar. Bangalore: DRTC.

Beynon-Davies P. (2002). Information Systems: An introduction to informatics in organisations. Basingstoke, UK: Palgrave.

Blackwell, K G (1968). Classification and information retrieval. Bombay: Asia.

Borko, H. (1968). Information Science: What is it? *American Documentation*, 19(1).

Buckland, Michael (2011). What kind of science can information science be? *Journal of the American Society for Information Science and Technology*.

Day, Ronald (2001). Modern invention of information. Carbondale: Southern Illinois University Press.

Ellis, D., Allen, D. and Wilson, T (1999). Information science and information systems: Conjoint subjects disjunct disciplines. Retrieved: May 25, 2013. http://www.cais-acsi.ca/proceedings/2000/monarch_2000.pdf)

Gopinath, MA and Seetharaman, S (1975). Interdisciplinary subjects and their classification. *Third International Study Conference on Classification Research*. Bombay.

Luciano Floridi (2002). What is the Philosophy of Information?. *Metaphilosophy*. 33(1-2).

Raman Nair, R and Sulochana Devi, L (2011). Sanskrit Informatics. Trivandrum: CIRD: 2011.

Ranganathan, SR (1967). Prolegomena to Library Classification. Bombay, Asia.

Ranganathan, S R (1967). Colon Classification. Bangalore, SRELIS.

Vickery, B. C (1973). Information Systems. London: Butterworth.

Wikipedia (2013). Retrieved: May 25, 2013. http://en.wikipedia.org/wiki/Information_science

Wikipedia (2013). Retrieved: May 25, 2013. http://en.wikipedia.org/wiki/Portal:Library_and_information_science

FORM IV

Statement About Ownership and Other Particulars About Informatics Studies

1. Place of Publication : Gayathri, Kudappnakunnu P.O, Thiruvananthapuram, Kerala – 695043, India
2. Periodicity of its Publication : QUARTERLY
3. Printer's Name : Dr. R. Raman Nair
Nationality : Indian
Address : Gayathri, Kudappnakunnu P.O, Thiruvananthapuram, Kerala - 695043, India
4. Publisher's Name : Dr. R. Raman Nair
Nationality : Indian
Address : Gayathri, Kudappnakunnu P.O, Thiruvananthapuram, Kerala - 695043, India
5. Editor's Name. : Dr. R. Raman Nair
Nationality : Indian
Address : Gayathri, Kudappnakunnu P.O, Thiruvananthapuram, Kerala - 695043
6. Name and address of the individuals who own the newspaper and partners or shareholders holding more than one per cent of the total capita. Dr. R. Raman Nair, Gayathri, Kudappnakunnu P.O, Thiruvananthapuram, Kerala - 695043, India

I, Dr. R. Raman Nair hereby declare that the particulars given above are true to the best of my knowledge and belief.

Date; 01.04.2015

Sd/- (Dr.R. Raman Nair) Publisher.



Contributors

Bino Jose: is a gold medallist for MLISc of Guru Ghasidas University in Bilaspur, obtained PhD from Berhampur University in Orissa, started career teaching at Mahatma Gandhi Chitrakoot Gramoday University in Madhya Pradesh, later moving to Allahabad Agricultural University and established the Dept of Information Science there, worked with JIIT and Shiv Nadar University in Noida, GLAITM in Mathura, Wipro Technologies in Bangalore, and Asia Pacific Institute of Management in Delhi. Is presently with XLRI Jamshadpur. Areas of interest include Library Automation, User Studies, IPR and Cloud Computing.

Jasimudeen S: Completed Post Graduation in Library and Information Science from University of Kerala with First Rank, has qualifications in radiological technology, broadcasting, journalism and computer applications. Worked with Kerala Government as Medical Imaging/Radiotherapy Technologist, as Professional Assistant at Digitization/ICT Lab in Mahatma Gandhi University, was team member of mgtheses.org project and has to his credit numerous published papers and seminar presentations, is a blogger and peer reviewer for journals. Is presently Librarian at St. Stephens College, Kottayam and is doing research for PhD on Health Literacy Programmes.

John Brownlee has worked for over a decade on a range of development programmes on governance, political participation, and civil society strengthening in Latin America, Malaysia, Indonesia, Philippines, India, Nepal, Zambia, Rwanda, Botswana, Nigeria,

and Tanzania. The challenges surrounding how knowledge is produced, shared, and used, led him to focus on knowledge mobilisation at Institute of Development Studies, UK where he currently leads a Knowledge Mobilisation and Impact unit that works globally to strengthen use of evidence in policy and practice, and to understand the impact that knowledge regimes and knowledge work have on development.

Jon Gregson, has tutored and jointly authored the SOAS postgraduate distance learning course on ‘Managing Knowledge and Communication for Development’ and previously tutored their courses on ‘ICTs for Development (ICT4D)’ and ‘NGO Management’. Until 2014 he headed up the Knowledge Services Department at Institute of Development Studies, UK and was involved in a wide range of Knowledge Management and ICT4D capacity development projects in Africa and Asia including the DFID funded ‘Mobilising Knowledge for Development’ and ‘Global Open Knowledge Hub’ projects for which he was Programme Director. Prior to that he was ‘Director of Global Networks and Communities’ for the University of London International Academy.

Nason Bimbe is a software engineer currently employed as Information Systems Manager at Institute of Development Studies, UK with over 15 years’ experience in ICT with specialisation in web, information and knowledge management. Has also worked at Betenoir, Tech-Connect Limited, Publishing Power Limited, American Express Limited, and Ministry of

Finance, Government of Zambia. In his current role, he is responsible for all ICT Management and support for British Library for Development Studies, and works on capacity building projects in Africa on Open Access, digital repositories and FOSS for libraries since 2011.

Rachel Playforth is a librarian and information specialist with 15 years combined experience in managing learning resources in higher education, cataloguing, and managing digital repositories at Institute of Development Studies, UK. She is a poet, reviewer and freelance editor and is a frequent contributor of papers, articles, blogs, and conference presentations on a range of information and library science topics from Open Access advocacy and practice through improving visibility and access to research from Southern countries. She is currently Assistant Librarian at Brighton and Sussex University Hospitals NHS Trust, UK.

Ramina Mukundan: has Masters in Library and Information science, and Postgraduate Diploma in Library Automation and

Networking. Has served at Cochin University of Science and Technology, Cochin Refineries School, Cambridge English School in Kuwait and Gulf University of Science and Technology. Has worked with ILS like KOHA, DSpace, Horizon, Follette System, Alice for windows and Libsys, Has developed web blogs and resources for children, and effectively incorporated Web 2.0 in library websites.

Tomy Varghese: has post graduation in Botany and Library and Information Science. Is a biotechnologist with specialization in plant tissue culture and has developed effective protocols and practices on somatic embryogenic micro-propagation of Date Palms (*Phoenix dactylifera spp*). Has served for decades as librarian in engineering and technology colleges and is presently Librarian at Muthoot Institute of Technology and Science, Cochin, Kerala. Is also a mofussil reporter for *Mathrubhumi Daily* - the second most circulated Malayalam newspaper. Has published several stories and news features and is an active blogger, with 1000+ followers.

Informatics Studies: Author Guidelines

Informatics Studies is a cross-disciplinary and refereed journal, focusing on areas that constitute the discipline of Information Science. Informatics Studies welcomes submission of manuscripts that meets the general criteria of significance and scientific excellence.

The submitting author is responsible for ensuring that the article's publication has been approved by all the co-authors. It is also the authors' responsibility to ensure that the articles emanating from a particular institution are submitted with the approval of the concerned institution.

Only acknowledgment e-mail from the editorial office officially establishes the date of receipt. Further correspondence and proofs will be sent to the corresponding

author(s) before publication unless otherwise indicated. It is a condition for submission of a paper that the authors permit editing of the paper for readability. All enquiries concerning the submission of manuscript(s) should be addressed to: editor@informaticsstudies.org

Electronic version of manuscripts should be submitted to the editor as MS Word file attaché with first author's surname plus year as filename (e.g.: hussain2012). The text, tables, photographs and figures should be included in a single MS Word file (preferably in Times New Roman font) with text double-spaced. Page settings should be for A4 size paper with 2.5 cm margin for all sides. Copies of illustrations and photographs should be attached also as separate TIFF files