

region, have their own indigenous mechanisms for conservation and utilization of bio-resources. Therefore, an active participation of the tribal societies can complement the efforts initiated at State or Central Government level.

D. Saha (Calcutta Patent Office) summarized the important aspects of Indian patent law and described the scope for patenting an innovation under the present patent law. He acquainted the participants with the procedural aspects of filing a patent. There were suggestions from the participants for amendment of the present patent law to allow patenting of processes and product base of IKS.

Two traditional healers from Arunachal Pradesh also shared their views about the present state of biodiversity and IKS in the state. Kaling Borang elucidated the importance of a few plant and animal species in the rituals of the tribal societies. He cited an example of the red-breasted squirrel which is gifted by the Adis to the bride's family during the marriage ceremony. According to tribal norms, the number of squirrels to be gifted is four; however, presently up to 500 squirrels are gifted. During the recent past, the number of red-breasted squirrels has dropped significantly due to indiscriminate killing. Borang stated that the use of

modern hunting gears like air guns and air rifles have aggravated the problem of conservation of rare species.

The seminar ended on a satisfactory note as it has opened up avenues for collaborative research on various fields of biodiversity among the participants, experts and representatives of different universities and research institutions.

A. K. Das* and **S. P. Shukla**, Department of Botany, Rajiv Gandhi University, Rono Hills, Itanagar 791 111, India
*e-mail: arupbot@rediffmail.com

MEETING REPORT

Open access and developing countries*

Free access to the world's research literature is the prize that is being sought by all who understand the need for sharing the results of publicly-funded research, without which many solutions to the world's problems will be delayed. To this end, a workshop on 'Electronic Publishing and Open Access: Developing Country Perspectives' was held recently. Some 30 experts met at the workshop for two days of intense discussion.

Participants from India, China, Brazil and South Africa were joined by other experts from Ethiopia, Germany, Japan, UK and USA, to consider ways to accelerate the progress of the international open access movement towards free access to essential scientific literature. The main aim of the workshop was to consider a national policy document for developing countries that could be used by governments or their science-funding organizations to speed up the scientific progress.

After a welcome address from S. Chandrasekaran (Secretary, Indian Acad-

emy of Sciences, Bangalore), N. Balakrishnan (Indian Institute of Science (IISc), Bangalore) spoke about the exciting 'million books' initiative, partnered with China, which aims to preserve valuable publications for posterity, using new technologies such as artificial intelligence to overcome language problems. He asserted 'What we need to do is change the "developing country" rhetoric to a world perspective'. This was followed by a thought-provoking keynote address by Lawrence Liang (Alternative Law Forum), who discussed the knowledge commons and the need to protect essential publicly-funded information from commercial barriers. He invited us to resist a property discourse that conflates property rights with academic rights and turns the collegiality of academe into the hierarchy of property. He argued that no one could 'own' knowledge and that the greatest scientists were often called 'gifted', implying that their contribution was given to the world openly. The concept of selling such knowledge was alien to the academic world. Property in the English sense, he said, the conflation of 'self' and 'own' resting on exclusion, is something not common to other languages. In Hindi, 'apnapan' is not a matter of owning, or property, but of closeness. Ownership in this sense has the obligation of care.

Barbara Kirsop (Electronic Publishing Trust for Development, UK) gave an overview of why developing countries should adopt open access, providing per-

suasive recent statistics that showed the rapid growth in the quantity of material currently available free to all. Alma Swan of Key Perspectives, a consultancy that has carried out a number of basic studies on the use and impact of open access policies, showed how the digital age is changing how science is recorded, evaluated and assessed. She had analysed the way scientists choose to communicate their results, their reasons for doing this and how they are responding to the open access development. Open access allowed science to progress faster, provided new data-mining opportunities, and gave funding agencies far better returns on their research investments. She highlighted the need for mandated policies to ensure rapid deposit of research publications. These two presentations made clear the great benefits to researchers, their institutions and their governments of an open access policy.

Abel Packer described the established SciELO system that provides open access to the content of 350 journals from Latin America, the main aim of which was to raise the visibility of research from this region. The system is publicly funded, based on a network of partners, has achieved a great increase in citations, and finds that users return to the system regularly. He advocated building on the Salvador Declaration for Open Access for Developing Countries.

The second day began with a presentation by Zu Guang'an on journal publishing

*A report on the workshop on 'Electronic Publishing and Open Access: Developing Country Perspectives' held at the Indian Institute of Science (IISc), Bangalore during 2-3 November 2006, with the support of the George Soros-funded Open Society Institute and organized by the Indian Academy of Sciences, Bangalore; IISc and the M.S. Swaminathan Research Foundation, Chennai.

in China and the activities and organization of the National Science Foundation of China (NSFC). He reported difficulties with language and visibility. Nevertheless, some 30 high-quality journals are supported by the NSFC, and the number of citations and downloads increases steadily. The Foundation attaches importance to developing good relationships with international journals. Zu Guang'an also presented a paper by Liu Xiwen of the Library of the Chinese Academy of Sciences, who could not attend the meeting. In his paper Xiwen traced recent developments in China, especially the conferences held and the portals and repositories developed. This presentation was followed by a series of important papers and discussions from South Africa in which, Eve Gray (an OSI Fellow), and Susan Veldsman (Soros-supported eIFL-OA organization) discussed the publishing situation in the region and the importance of open access in making progress. D. K. Sahu (MedKnow, Mumbai) provided valuable statistical information on the impact of open access on the journals using the MedKnow services. He described the economic sustainability of the system that provides open access to all contents and yet recovers costs. Submissions, subscriptions and impact were all increasing each year since converting to open access. The role of INASP in supporting regional publications was presented by Pippa Smart (INASP), and interesting contributions were also made from the viewpoint of IDRC, Topaz software organization and others. A. R. D.

Prasad (ISI) mentioned about the many training programmes that have been conducted in India to help build capacity to set up and maintain OA archives. Muthu Madhan of the National Institute of Technology, Rourkela, the only Indian institution to have mandated self-archiving of all faculty and student research publications, mentioned that after the mandate more than 90% of papers are being deposited by the authors. S. Krishnan (National Chemical Laboratory, Pune) emphasized the need for archiving data. Sunil Abraham (a member of the Open Source Initiative (OSI) board) suggested that citizens, as tax payers and consumers, have a right to get free access to results of publicly-funded research. A rounded series of contributions set the scene for discussions on the way ahead.

The workshop ended with a discussion chaired by M. R. N. Murthy (IISc) on a proposed national policy document that could be used to promote acceptance of the open access strategies outlined in the Budapest Open Access Initiative and based on the Salvador Declaration for Open Access for Developing Countries. The proposed policy document was discussed by all participants and a number of suggestions were made for improvement. These were noted and after the workshop the document was revised and re-circulated to all participants for approval. The final document was prepared incorporating further recommendations received through e-mail and was circulated widely. It may be accessed from the workshop website: <http://www.ncsi.iisc.ernet.in/OAworkshop2006>.

It is hoped that this National Open Access Policy for Developing Countries will provide a major step forward to adopting open access as a way to release all publicly funded research publications from financial and other barriers, thus creating a level playing field for scientific development worldwide. Without the free and full exchange of scientific information, the solving of the major problems affecting countries – tsunamis, avian flu, HIV/AIDS, global warming, emerging infectious diseases – will forever be delayed. The development of the World Wide Web, donated free to all by its inventor, Tim Berners-Lee, provides a magnificent opportunity for scientists everywhere to share their experimental output with colleagues around the world.

The indefatigable energy of Subbiah Arunachalam (M.S. Swaminathan Research Foundation, Chennai) allowed this important workshop to take place, bringing together representatives of some of the most scientifically advanced developing nations to consider and agree upon a common policy for progress. IISc with its sylvan surroundings, provided a magnificent setting.

Presentations, a list of participants, open access resources, the OA Policy Document and other information are all available at: <http://www.ncsi.iisc.ernet.in/OAworkshop2006/presentations.htm>

Barbara Kirsop, Electronic Publishing Trust for Development, UK.
e-mail: ept@biostrat.demon.co.uk

MEETING REPORT

Mathematical finance*

Mathematical finance has been one of the most active research areas among the probability and statistics community in recent years. The main objective of the meeting on mathematical finance held recently, was to bring together interested scientists from India and boost this acti-

vity, which has so far been rather sporadic in our country. Twenty-four persons participated in the meeting: 15 faculty members from various institutions, five students, two-postdoctoral fellows, and two professionals from the finance industry.

During the meeting twelve lectures and two discussion sessions were held. Three main topics covered were: Risk processes, Interest rate models, and Volatility estimation.

Risk processes play a significant role in insurance and other areas. S. Ramasubramanian (ISI, Bangalore) gave a series of lectures on this topic. In his lectures basic framework of the Cramer–Lundberg model and the renewal model of insurance risk were reviewed. Ruin problem in both models was described. Renewal-type equations and Pollaczek–Khinchin formula for ruin/survival probability were discussed. Exponential decay or ruin probability in small claims case, and

*A report on the discussion meeting on 'Mathematical Finance' organized by the Indian Academy of Sciences, Bangalore at Orange County, Coorg during 29 November–3 December 2006.