Workshop/Seminar/Brainstorming/Training etc. (Details with Duration year wise)



Workshops

2014 – 15

BRIDGES 2015 – International Workshop on "Bridging Development Divide for Inclusive Growth through Science, Technology and Innovation" during January 16 – 17, 2015

2015 – 16

Workshop on "Concrete Strategic Thinking and Innovation" by EPFL, Lausanne, Switzerland on July 31st, 2015

2017 – 18

"The Age of Connectivity & Customisation: S&T Challenges for the Indian Reality". Dr. Aadya Shukla, Computer Science and AI Lab, MIT, USA (16th October 2017)

2018 – 19

STI Workshop on "Building national STI policy system and governance for effective R&D Ecosystem" on 05.03.2019 and Review Meeting of DST-STI Post-Doctoral Fellows of all the 5 DST-CPRs

Workshop on "Environmental Hazards of Electronic Waste" on 13.03.2019 by Dr. Shalini Sharma, CEO, E-Waste Exchange, Hyderabad and Prof. V. P. Sharma, CSIR-IITR

International workshop with Inland University, Norway on "Mainstreaming social inclusion in technology and innovation"

Seminars

2015 – 2016

Symposium on "Policy and Practices of Sustainable Agriculture and Climate Change Management" on 24th November, 2015, BBAU

2016 – 2017

National Seminar on "Healthy Rivers - Ecosystem Benefits & Prosperity" during September 19-20, 2016 with IWRS

"Role of Science, Technology and Innovation for Inclusive Health Care" on 15th February, 2017 during International Conference on Updates in Cancer Prevention and Research held from 14 – 16th February, 2017, BBAU

2018 – 2019

Seminar on National Science Day 28.02.2019 on the theme of "People for Science, Science for People"

Training

"Wannabe Entrepreneur: Art of the Possible" – by Mr. Anil Sethi, CEO, Swiss Extension GmbH, Switzerland, 2015

"Regenerative Agriculture: the future of sustainable development in Australian Agriculture and lessons for India"

STI Lecture Series 2019

DST- Centre for Policy Research

"Water Policy & Transformative Challenges"

By

Dr. Richard Thomas

School of Science, Western Sydney University (WSU), Australia

DST- Centre for Policy Research and DES, Babasaheb Bhimrao Ambedkar University jointly organized a very interactive STI Series Lecture on 27th November 2019. The guest speaker Prof. Richard Thomas, who is a senior faculty at Western Sydney University, Australia, spoke on "Regenerative agriculture as the future of sustainable development in Australia". Prof. Thomas explained about the approach to create a system of farming which is based on principles and practices that increases biodiversity, enriches soils, improves water resources, and enhances ecosystem services. In his lecture, he highlighted the issues in Australia in terms of water and nutrients then the solutions to them based upon the experiments done at the University level. He provided a brief overview of the technologies such as GPS enabled precision agriculture technology, use of aerial images for surveillance, vegetation indices, and its applications in agriculture systems. He concluded his lecture with several methods that can be put as best practices for water conservation such as storm water harvesting, constructed wetlands, farm planning, using treated wastewater for irrigation etc.

In many regions of the world, particularly in water-scarce urban and peri-urban areas of Australia where competition for water is high, wastewater is being used for agricultural purposes. Wastewater use in agriculture is much more commonplace in India than many believe. However, due to absence of any regulatory standards for their application in irrigation, contaminants are entering in our food chain. At present, approximately 20 million hectares of arable land worldwide are irrigated with wastewater. The unreported use of wastewater in agriculture can be even more.

"In Australia, treated wastewater is used only for pastures and not for food crops", said Professor Richard Thomas of Western Sydney University, Australia during a lecture organized at BBAU, Lucknow. He stressed that safe use of wastewater in agriculture is an important water resources issue that needs to be addressed. The program coordinator Dr. Venkatesh Dutta said that efforts are needed to advance the treatment process and regulatory standards our national policies for safe use guidelines and practices.

Another lecture was delivered by Er. Ravindra Kumar, a water resource management expert and consultant at Tahal Group. He talked about the management of water resources of Ramganga river basin. He briefed about various challenges faced in managing the water resources in the basin in terms of equity, efficiency, and sustainability and solutions to counter these issues. Speaking on the occasion, water resources expert Ravindra Srivastava said that available fresh water resources, are not evenly distributed in India, and are already scarce in many states, affecting poor people the most as they cannot access other

sources of water for irrigation. He added that in Ramganga and Gomti river basins, the use of groundwater for irrigation is in the range of 89 to 95% of total available water. Over 80 per cent of wastewater is not collected or treated, and there is a great scope in reusing water after necessary treatment has been done to meet human health and safety requirement. The vote of thanks was presented by Prof. N. K. Arora who highlighted the issue of water conflicts between Uttar Pradesh and Uttarakhand due to diversion of water through dams and reservoirs. The session was successfully conducted by Mr. Prabir Bose – Director of Grameen Development Services (GDS), Lucknow.

International workshop with Inland University, Norway

Experts all for mainstreaming social inclusion in technology and innovation



DST-Centre for Policy Research at BBAU, Lucknow organized an international workshop for international participants from Inland University, Norway on the theme of technology-led innovation and sustainability. The participants from Norway shared their experience of participatory development in India and how people-based approach could be used towards improving the access to technology to the marginalized, underprivileged and poor people. Speaking on the occasion, Varun Vidyarthi, founder of Manvodaya said that successful facilitation of people based development calls for a clear vision and strategy as well as a suitable attitude among policy practitioners. He also stressed upon the need for facilitation, training and capacity building for the successful deployment of affordable technologies in the areas of agriculture start-up, health care and water. Dean of the School, Prof. S. K. Dwivedi said that academicians and researchers should also work in grassroots setting in villages for enhancing the research output. Dr. Venkatesh Dutta, Convener of the programme said that there are many areas where meaningful intervention is required for social change and community development. According to Dr. Dutta, the conventional

paradigm of development has many limitations wherein technological advancements have generally favored rich and the elite, , time has come, where a new paradigm of enabling and empowerment through access, affordability and equity could be evolved through better diffusion of technological advancements. Clarity of vision, the right attitude and a grassroots perspective and clear diffusion model for technology and innovation are essential prerequisites for meaningful development intervention. Ms. Anjali Tripathy from WaterAid India highlighted the best practices of water and sanitation coverage with poor villagers at grassroots level. She said that discussion and direct interaction with the community in the field prior to the programme and facilitation during the outreach helped in better success of coverage and maintenance of sanitation infrastructure. Speaking during the workshop, Prof. Naveen Arora, Head of the Department of environmental science briefed the participants about various sustainability goals facing the mankind and how technology and innovation could help achieve those goals in a relatively shorter time-frame.



International Workshop on Technology-led Innovation and Sustainability


NDIA
SEAN
OTECH
MMIT
INDIA
ASEA
INNOTE
SUMM
FICCI
RUPINDER TEHARI
RAJAT KATHURIA
ANITA AGARWAL
SINT SOE




BABASAHEB
BHIMRAO
AMBEDKAR
UNIVERSITY

Invited Lecture and Workshop on

"Innovation and Strategic Thinking"

6th July 2015



By

Professor Alain Wegmann

Systemic Modeling Laboratory EPFL, Lausanne, Switzerland

&

Dr. Anshuman Saxena

SEAM - Laboratory for Systemic Modeling LAMS – EPFL - Lausanne, Switzerland







Workshop by Prof. Alain Wegmann, EPFL at DST-CPR, BBAU



Meeting with officials of UP Irrigation Department on real time monitoring of floods







Hosted scholar from University of Oxford



Understanding edushala model of innovation in e-learning





Interacting with Nepal-Agro entrepreneurs



Water group surveying farmers in Bundelkhand





DST-CPR Project review meeting with external advisors at BBAU



With Global-preneurship team, interacting with Sarvodaya Hospital during Stakeholder's survey



Visit of Betty Olivolo, NAEE, USA to DST-CPR, BBAU





Workshop with Prof. William Taylor & US embassy in Lucknow on innovations in wastewater treatment



Book Release by Principal Scientific Advisor during the 104th Indian Science Congress



DST-CPR organised a session during the 104th Science Congress under the Chairmanship of Late Prof. Baldev Raj, Director, NIAS



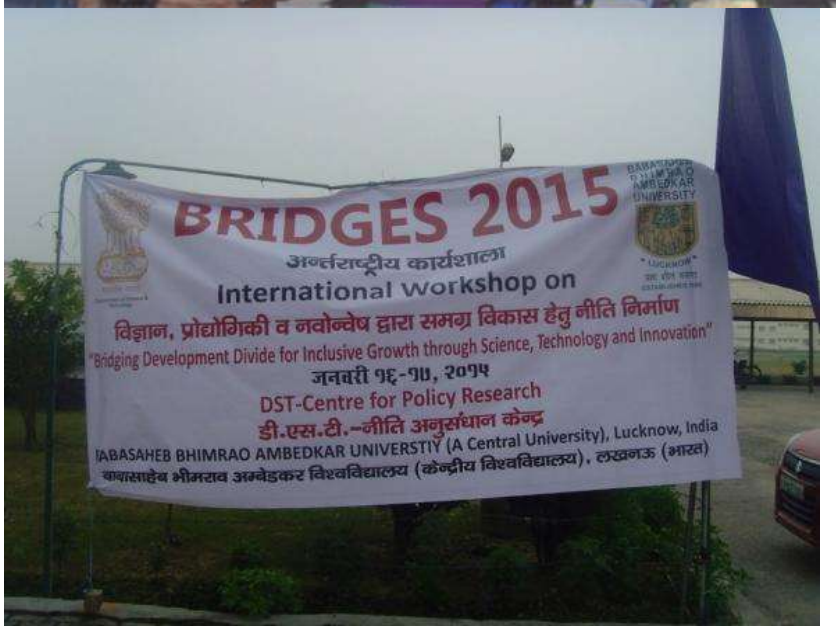
Review Meeting of STI-Post Doctoral Fellow in 2019










BRIDGES 2015
अन्तर्राष्ट्रीय कार्यशाला
International Workshop on
विज्ञान, प्रोद्योगिकी व नवोन्वेष द्वारा समग्र विकास हेतु नीति निर्माण
"Bridging Development Divide for Inclusive Growth through Science, Technology and Innovation"
जनवरी १६-१७, २०१५
DST-Centre for Policy Research
डी.एस.टी.-नीति अनुसंधान केन्द्र
BABASAHEB BHIMRAO AMBEDKAR UNIVERSTIY (A Central University), Lucknow, India
बाबासाहेब भीमराव अम्बेडकर विश्वविद्यालय (केन्द्रीय विश्वविद्यालय), लखनऊ (भारत)

STI Policy Lecture Series during 2019 and 2020

11.01.2019: Bridging the Gap between Academic Research and Industry: European Perspective

Dr. Bishal Singh, Scientist, Paras Biopharmaceuticals, Finland

Dr. Abhishek Sharma Bharadwaj, Post Doc Scientist, Luxembourg Institute of health, Luxembourg

Dr Bishal Singh, Research Scientist from Paras Biopharmaceuticals Finland Oy, Finland delivered the lecture on "Bridging the Gap b/w Academic Research and Industry: European Perspectives". He delved on Technology Readiness Level (TRL) that how a product can come from lab to land and explained about the phases of innovation from university to industry and how the product launch takes place. He elucidated on Basic Ideas, Concept developed and Proof of concept, how they come from university and reach the innovation phase involving Process validation, Capability validated Economic Run thereafter reaching the industry phase involving "Capability validated Range of Parts", when the product launch actually takes place. He also explained about the difference in objectives of Academia and Industry in R&D. Further, the incubation centres, Atal Innovation Mission, Technology Parks, Food Parks and other opportunities in India have also be discussed and compared with European R&D ecosystem. Dr. Abhishek Sharma Bharadwaj, Post Doc Scientist, Luxembourg Institute of Health, Luxembourg has also discussed the opportunities in Europe.

16.01.2019: 3D (Bio) Printing at A*STAR Singapore and Future in Indian Research Labs

Dr. Nai Mui Ling Sharon, Senior Scientist, SIMTECH, A*STAR, Singapore

Dr. Deepak Choudhury, Senior Scientist, SIMTECH, A*STAR, Singapore

The applications of 3D (Bio) Printing in biomedical sectors, drug delivery, drug discovery, drug testing systems, and implants were discussed. The major challenges in 3D (Bio) Printing have been highlighted by the speakers, which are outlined below:

- Materials
- Stability
- Scalability
- Skilled manpower
- Regulatory Challenges
- Ethical Concerns
- Cost Effectiveness

The main hurdles faced by researchers in developing countries like India are:

- Unavailability of efficient 3D (Bio) Printer from Indian companies
- Technology not clear to the machine manufacturers in India
- Proper and variety of BioInk unavailability
- Trained and skilled manpower unavailability
- Despite many applications, India is still struggling for well-equipped 3D (Bio) printer and thus basic R&D activities.
- Number of products and patents from India is evidently lesser as compared to other leading countries

The speakers suggested making a visionary group to put forward the vision for next 20 years of 3D (Bio) Printing in national R&D, in areas like:

- *In-situ* 3D (Bio)Printing through gesture control
- *In-situ* 3D (Bio)Printing through movable arms in multiple axis
- 3D (bio)printing of industrial materials e.g. natural rubber
- Scaffold enrichment
- Cryoplate based scaffold
- BioInk
- Nutraceutical Delivery
- Drug Discovery and Delivery

30.01.2019: Progressive Farming in Drought Prone Areas of Bundelkhand

Mr. Pankaj Bagwan

Sri Pushpendra ji, Farmer, Banda

The agenda discussed in this meeting focused on the points that needed to be adopted in agricultural system which could bring prosperity to farmers in drought-prone areas of Bundelkhand. Need for water conservation as a key to fight against drought was stressed. Mr. Bagwan, discussed the success of project 'Apna Talab Abhiyan' that they have been implementing in various district of Bundelkhand. He also presented an ideal farm field model which he called as the 'One Acre Farm Model'. Significant feature of this model is that it allocates certain proportion of farm land to every component that includes – cropland, cattle, fodder, water harvesting structure and farmer itself. Mr. Bagwan advocated that each of these components have to be in close vicinity of each other for agriculture to be sustainable and that could bring prosperity to farmers.

15.02.2019: Minimum Assured Income: An Implementation Approach

Mr Abhinav Ramesh, Director, FutureFlux Technologies Pvt Ltd

Public welfare measures are not lacking. In fact, the Indian government runs a large number of programs aimed at bringing relief to a wide variety of groups in the society. However, most of these programs have been found to be less than successful in reaching their intended recipient due to mis-targeting and misallocation of resources, as seen in The Economic Survey of 2016-2017. As a

result, India continues to feature amongst the top three nations with the highest number of poor people. One stable and potential solution to this is to roll out a Universal Basic Income (UBI) program, an emulation of a social security system that can put the brakes on poverty.

However, UBI in its text-book definition will not work for India, at least in the short term. What we need is a Minimum Assured Income (MAI) program implemented within a secure, tamper-proof system that can at once address both targeting issues as well as the problems surrounding leakage of funds and the inefficiency in administrating the benefits. While fiscal cost and the expected load on administrative offices can be addressed through appropriate policy decisions, the actual problem at hand is one of implementation. This is where the Blockchain technology comes in.

Blockchain is a revolutionary distributed ledger system that enables data and transactions to be immutable and completely transparent. It establishes trust in a way that has so far never been imagined – a much required feature in governance where citizens demand utmost transparency. By implementing MAI on Blockchain, we can effectively address both the problems of allocation and targeting. MAI on Blockchain provides extensive scope for targeting different population groups including farmers, women and unemployed youth amongst others. With the underlying technology guaranteeing efficient, leakage free, direct fund transfers to the identified beneficiaries, the question now is one of when we are implementing MAI rather than how.

03.05.2019: Introduction on India Japan R&D Ecosystem on Academic Industry Conclave

Dr. Divya Anand, Technical Manager for Strategic Research & Development, Nippon Paint, Osaka, Japan

The major funding of Industrial and Academic researchers have been discussed during the lecture. The influence of cultural habits on high-quality outcome in research was also discussed. Japan's Policy on Innovation and Start-ups was discussed in brief. Difference in Japanese and Indian Academic School Education System was discussed and a brief outline was summarized on how it benefited the R&D ecosystem in Japan. The CSR activities, migration of Japanese for research, and language barrier in Japan were discussed and also how they connected with their self sustainable R&D ecosystem.

Science, Technology and Innovation (STI) plays a vital role in nation building by advancing R&D and innovation for socio-economic development. DST-CPR, BBAU organised a workshop on "Building National STI Policy System and Governance for Effective R&D" for capacity building within the framework of STI System of India. The Workshop focused upon the emerging issues and trends on the STI policy process and its components for building capacities as well as understanding of the functioning of national STI system. The major highlights of the workshop were:

- Design of National STI Policy System
- Science for People & People for Science
- Policy Innovation for Health
- Capacity Building of Policy Professionals
- Innovations for Startups

- Responsible Research & Innovation System
- IPR Policy & Governance
- Technology Building & Transfers
- Sustainable Agriculture
- Scientometrics & Indexing

Following speakers gave their presentations:

- Dr. Alok Dhawan, Director, CSIR-Indian Institute of Toxicological Research, Lucknow
- Dr. VK Joshi, Department of Dravyaguna, Faculty of Ayurveda, Banaras Hindu University, Varanasi
- Prof. N.B. Singh, University of Maryland, USA
- Dr Anand Sharma, Deputy Director General of Meteorology, India Meteorological Department, Govt. of India, New Delhi
- Prof B.N. Mishra, Head, Department of Biotechnology, Institute of Engineering and Technology, Lucknow
- Dr Amit Singh, Assistant Professor, UPES, Dehradun
- Dr Ashutosh Singh, Assistant Professor, Department of Biochemistry, University of Lucknow
- Mr. Vishav Shamra, Team, Clarivate Analytics, Bengaluru, Karnataka

Further, on the next day of the workshop i.e. 6th March, 2019 the Annual Review meeting of STI Post Doctoral Fellows were conducted by the review committee.

Seminar on "Science for people and the people for science" (28 February 2019)





Policy Workshop (05 March 2019)





Invited lecture by (28 February 2019)











Seminar on technology led innovations (28 February 2019)

POLICY CONSULTATION



