ICER-16

PROGRAMME BOOK

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Message from Vice-President

Dear Participants,

FachhochschuleLübeck is proud to welcome organizers and attendants of the ICER-16 conference on its campus. A broad wealth of environmental problems will be addressed and presented from July 27th to July 28th ,2016. The scope of the conference is to address the state of the art and new developments in environmental research and engineering ranging from renewable energy production or environmental assessment to social aspects of environmental science. The conference - beyond its scientific scope - will be an opportunity to foster our international ties between Indian and German scientists and engineers, encompassing also participants from African and American countries. Therefore, we strongly believe that it will fit perfectly into our universities strategy of international cooperation and exchange as well as our strong competences within the field of environmental engineering. Fachhochschule Lübeck is a university of applied sciences with more than 4.000 students in the fields of engineering, architecture and economics. We are focused both on application oriented education with strong connections to the relevant companies as well as on research and scientific transfer into companies and society. The university campus – together with the University Lübeck and more scientific institutions - is located South of the historical city of Lübeck, former capital of the, Hanse'-collaboration of the biggest trading cities in Northern Europe during the late medieval and beginning modern ages. Consequently, we hope to provide a professional and efficient and at the same time pleasant and interesting location for your conference. We congratulate JERAD as a partner in publishing the results of this conference and wish all participants a successful and fruitful conference ICER-16.

Vice-President
Professor Dr. H. Botterweck

Message From Director

Dear Participants,

It is my pride privilege to be a part of this magnificent international event for the welfare of whole humanity. At this auspicious occasion, I would like to greet you all. I believe that **8th International Congress of Environmental Research** will prove itself a precursor of joint venture of scholars from different disciplines of environment throughout the world. Total 264 research articles from all disciplines of environment were received by the organizing committee. Out of which, 222 research abstracts are found suitable for its publication in the special conference edition **ICER-16**. Eventually, 63 selected scholars are getting opportunities to read, present and discuss their research papers either in its oral or poster form. Further, the same will be forwarded for its publication in the **JERAD** (Journal of Environmental Research And Development).The main objectives of the congress since beginning is to awaken the present generation to save environment and hence huge participation of professors, scientists, engineers, academicians, environmentalists, industrialists, NGOs and other scholars across the globe indicate that our efforts are going to be true in the form of this congress. In addition, this will play a significant role in joining the young generation with us to solve the most crucial problem of the day. It is worth notable that young scholars along with their supervisors are actively participating in the Luebeck congress to show their concern for environmental protection and conservation. Gratefully, Luebeck University of Applied Sciences has extended its consent for hosting 8th congress. Indeed, I am proud to have Luebeck University as our partner for ICER-16, Luebeck, Germany.

I wish this mega academic event will be significant not only in sharing, analyzing and finding out solutions of many environmental problems but also in bringing a drastic change in the attitude of the people.

Director, ICER-16
Professor Dr. Subhash C. Pandey

CONFERENCE SCHEDULE

Day One : 27 July 2016

Time		Particular	Venue
From	To		
8:30:00 AM	9:00:00 AM	Registration	FHL, building 1, foyer
9:00:00 AM	9:45:00 AM	Inauguration ceremony	FHL, building 1, foyer
9:45:00 AM	10:15:00 AM	Keynote/Professor Dr. Michael Bischoff	FHL, Mönkhofer Weg 239, building 1, room 2
10:15:00 AM	10:45:00 AM	Tea / Coffee	FHL, building 1, foyer
10:45:00 AM	12:15:00 PM	Parallel Oral Presentation SESSION I	FHL, Mönkhofer Weg 239, building 1, room 2+3
12:15:00 PM	1:15:00 PM	Lunch	University restaurant
1:15:00 PM	2:00:00 PM	Combined Poster presentation (Physical sciences + Life sciences + Law & Managt)	FHL, building 1, foyer
2:00:00 PM	3:30:00 PM	Parallel Oral Presentation SESSION II	FHL, Mönkhofer Weg 239, building 1, room 2+3
3:30:00 PM	4:00:00 PM	Tea / Coffee	FHL, building 1, foyer
4:00:00 PM	5:30:00 PM	Parallel Oral Presentation SESSION III	FHL, Mönkhofer Weg 239, building 1, room 2+3
7:00:00 PM	9:00:00 PM	Cultural evening	FHL

Day Two : 28 July 2016

Time		Particular	Venue
From	To		
9:00:00 AM	10:30:00 AM	Parallel oral presentation SESSION IV	FHL, Mönkhofer Weg 239, building 1, room 2+3
10:30:00 AM	11:00:00 AM	Tea / Coffee	FHL, building 1, foyer
11:00:00 AM	12:30:00 PM	Parallel oral presentation SESSION V	FHL, Mönkhofer Weg 239, building 1, room 2+3
12:30:00 PM	1:30:00 PM	Lunch	University restaurant
1:30:00 PM	2:00:00 PM	FICER-Meet (Fellow, International Congress of Environmental Research)	FHL, Mönkhofer Weg 239, building 1, room 2
2:00:00 PM	3:30:00 PM	Valedictory and Award ceremony	FHL, Mönkhofer Weg 239, building 1, room 2
3:30:00 PM	4:00:00 PM	Tea / Coffee	FHL, building 1, foyer
4:00:00 PM	7:00:00 PM	City tour	Departure from FHL

Note : Sections are merged in two parallel sessions

Science & Technology : ST (Technology + Physical sciences + Life sciences)

Social Science : SS (Social Sciences + Law & Management)

Parallel Session I : ST : Invited talk + 7 oral presentations

: SS : Invited talk + 6 oral presentations

Parallel Session II : ST : Invited talk + 7 oral presentations

: SS : Invited talk + 6 oral presentations

Parallel Session III : ST : Invited talk + 7 oral presentations

: SS : 6 oral presentations

Parallel Session IV : ST : Invited talk + 7 oral presentations

: SS : Invited talk + 4 oral presentations

Parallel Session V : ST : Invited talk + 7 oral presentations

Paper presentation through conferencing : 1

Total Invited talks = 8

Total oral presentations = 58

Total poster presentations = 5

SCHEDULE OF PAPERS AND PRESENTATIONS

The time allotted for Invited talk is 17 min. presentation + 3 min. discussion and for paper presentation 7 min. for presentation + 3 min. for discussion. Speakers are requested to strictly adhere to the time allotted.

Day One : 27 July 2016

PARALLEL ORAL PRESENTATIONS in Respective Session Halls

SESSION I Time : 10.45 AM to 12.15 PM

Science & Technology : **ST** (Technology + Physical sciences + Life sciences)

Chairperson	**Dr. Ganesh Hend, Amravati (India)**
Co-ordinator	**Dr. Tarun Thakur, Amarkantak (India)**
Invited speaker	**Professor Dr. Vinod K. Agrawal, Bangalore (India)**  **Biography** Joined ISRO, India in 1978 and worked extensively on the design and development of Spacecraft on- board computers. These computers are being used in all remote sensing and geosynchronous spacecrafts. After working for about 30 years in ISRO, he joined General Motors R & D Bangalore, December 2008, as Lab group Manager Electrical and Software Architecture and was working on fault-tolerant techniques for automotive computer systems. Since April 2011, he is working at PESIT as Director for Crucible of Research & Innovation and Professor Information Sc and engineering. In PESIT, he has been promoting research activities in the area of advanced computing, automotive electronics and Satellite technology with government and private sector funding. Professor Agrawal was

	honoured with Sir C.V. Raman Award for Young Scientists by Government of Karnataka, 1996-97, Astronautical Society of India Award, 2005, Government of India, Dept of Space Merit Award, 2007 and 18th IETE- Hari Ramji Toshniwal Gold Medal Award, 2007. He is a senior member of International Academy of Astronautics, Paris, IEEE, International Society for Micro-electronics and Packaging and Astronautical Society of India. Also, he is Fellow, National Academy of Engineering, New Delhi. Professor Agrawal has more than 150 publications so far. **Title :** Electronic waste : Challenges and its management **Abstract** The rising levels of Electronic waste (e-waste) generation have been a matter of concern in recent years. Electronic waste is posing serious concerns to public health and environment. E-waste typically includes discarded computer monitors, motherboards, cathode ray tubes (CRTs), printed circuit board (PCB), mobile phones and chargers, compact discs, headphones, white goods such as liquid crystal displays (LCD)/ plasma televisions, air conditioners, refrigerators etc. Computers, televisions and mobile phones are most dangerous because they have high levels of lead, mercury and cadmium and they have short life-spans, so are discarded more. The global volume of e-waste generated is expected to increase by nearly three times by 2020 from the existing at a compound annual growth rate of about 30%. As citizens become richer and spend more on electronic items and appliances, computer equipment accounts for almost 70% of e-waste material, followed by telecommunication equipment (12%), electrical equipment (8%) and medical equipment (7%). Other equipment, including household e-crap account for the remaining 4%. A mere 5% of total e-waste gets recycled due to poor infrastructure, legislation and framework which leads to a waste of diminishing natural resources, irreparable damage of environment and health of the people. Over 95% of e-waste generated is managed by the unorganized sector and scrap dealers in this market, dismantle the disposed products instead of recycling it. E-waste accounts for approximately 40 percent of the lead and 70% of heavy metals found in landfills. These pollutants lead to ground water, air pollution and soil acidification. High and prolonged exposure to these chemicals/ pollutants emitted during unsafe e-waste recycling leads to damage of nervous systems, blood systems, kidneys and brain development, respiratory disorders, skin disorders, bronchitis, lung cancer, heart, liver, and spleen damage. This presentation covers the major aspects of e-waste generation, and addresses the challenges foreseen for its disposal, recycle and reuse.
	PAPER PRESENTATION
001-T	Clean and green energies development and sustainable buildings development **Abdeen Mustafa Omer (UK)**
104-PS	Effect of light at night on melatonin rhythm in human volunteers **Maya Shedpure, Preeti Karanjgaonkar and Mamta Ratre (India)**
004-LS	Effect of temperature during grain filling on rumen starch degradation of maize kernels differing in amylose and amylopectin content at two maturity stages **M. Alia, Hafiz Muhammad Rashad Javeed , J.W. Cone , W.H. Hendriks and** **P.C. Struik (Pakistan)**
011-LS	Vermicomposting of animal wastes by using biocatalyst and Earthworm species, *Eudrilus euginae* Kienberg, 1867 **S. S. Patole and B. C. More (India)**
012-PS	Biodegradation of silver coated paper dishes by using earthworm *Eudrilus eugeniae* **More B. C. and Patole S.S. (India)**

178-PS	Anoxic biodegradation of synthetic petroleum refinery wastewater containing sulphide, phenol and diesel **Subrat Kumar Mallick and S. Chakraborty (India)**
214-PS	Detection of antibiotic-resistant bacteria in final effluent from wastewater treatment plant **ZummyDahria Mohamed Basri, Marfiah Ab. Wahid and Chua Ang Lim**
SESSION I Time : 10.45 AM to 12.15 PM **Social Science** : **SS** (Social Sciences + Law & Management)	
Chairperson	**Dr. J. N. Sharma , Gauhati (India)**
Co-ordinator	**Dr. Reshma Lakesh, Bhilai (India)**
Invited speaker	**Dr. Louiza Rodrigues , Mumbai (India)**  **Biography** Dr. Louiza Rodrigues is an Associate Professor, Department of History, Ramnarain Ruia College, Mumbai, India. Her area of specialization and interests are Environmental History, Genealogy and Heritage of Mumbai. She has major research projects from reputed institutes like the K. R. Cama Oriental Institute of Mumbai, Asiatic Society of Mumbai, Mumbai University, Raksha Shakti University, Ahmedabad, Willingdon Sports Club, Mumbai and Exeter University for Gulf Studies, United Kingdom. She has also to her credit more than 25 Research papers and articles in books and journals of National and International repute. She is also a recognized Ph.D. guide from Ramnarain Ruia College and University of Mumbai. She was awarded in 2013 the Best Paper Award and a Cash Prize, Section III : Modern India. Professor P.S. Gupta Memorial & J.C. Jha Prize in Indian History Congress, 73 Session. She is the chief author of two books on the history of the Seth and Sethna family and Edited two volumes on this family which was recently released by Sir Ratan Tata in January 2015. Recently, she authored a monograph on' Philip Anderson '1816 – 1857' published by Indus in November 2016. **Title :** Colonial state and the management of the forests of Bombay Presidency : Nineteenth century **Abstract** With the advent of the British in India, timber became the most important commodity of the State for the infrastructural development in the Bombay Presidency. Timber was drawn primarily from four states namely, Malabar (Kerala), Karnataka, Gujarat and Maharashtra to construct ships in the Bombay dockyard, civic construction and railways. The overuse of timber had a catastrophic effect on the forests of the Bombay Presidency. The deteriorating conditions of the forests impressed upon the British Government the need to conserve the forests. The colonial state devised various plans and strategies to conserve and manage the forests. Initially their forest conservation programmes were unscientific and ended in failure. Trees of commercial interest were given importance like Teak. It is interesting to note that in the latter part of the nineteenth century German foresters who were trained in scientific forestry were invited to manage the forests. German foresters like Dietrich Brandis succeeded in conserving the forests and making it sustainable. It is argued that the underlying policy of the state was commercialization of the forests focusing on conserving teak trees rather than having real concern for the environment. The aim of the paper is to explore and evaluate various strategies and plans adopted by the colonial state in the management and conservation of the forests of Bombay Presidency in the Nineteenth Century. It is based on primary sources called from the Maharashtra State Archives and is supplemented with secondary sources.
	PAPER PRESENTATION
007-SS-I	Indian literature and environment **Dhirendra Shukla and Malvika Guha (India)**

024-SS-I	Agrotourism : Alternative for improving income and potential economic viability of small farms and rural communities **R. D. Shelke (India)**
026-SS-I	Managing traffic in a flooded environment : The case of Akure , Nigeria **E. F. Ogunbodede (Nigeria)**
029-SS-I	Forest restoration through a forestation and management process by social participation : A case study of India **Shashi Bhushan (India)**
073-SS-I	Environmental issues in Tamil Nadu, India **V. Ranjan (India)**
038-SS-I	Investigating ecotourism as an approach for sustainable development : A case study of Taft Region in Central Iran **Nastaran Ehsani and Raymond Rastegar (Iran)**
POSTER PRESENTATION & EXHIBITION (Physical sciences + Life sciences + Law & Management) Time : 1.15 PM to 02.00 PM	
Chairperson	**Dr. H. Ramachandra, Karnataka (India)**
Co-ordinator	
097-LS	Bio-management of agro-origin wastes for value addition **A. Grewal, S.S. Hundal and S. Sharma (India)**
094-PS	Evaluation of noise pollution level in Iran for the purpose of prevention and controlling its effects : A Case study of Area 4 - Ahvaz City, Iran **Ali Tabibi, Hamid Zarei, Hosein Moslemi,Mohsen Yazdani and Gholam Hooseyn Papri Moghadam (Iran)**
135-PS	Construction and comparison of solid liquid phase diagrams of synthetic binary fatty acid mixtures – palmitic/stearic and oleic/linoleic/linolenic acid mixtures **Dipl.-Ing. Karl-Andreas Eckert, Sunanda Dasgupta ,Benjamin Selge and Peter Ay (Germany)**
204-PS	Melt crystallization kinetics for enrichment of highly unsaturated fatty acid fractions based on linseed oil **Dasgupta Sunanda, Dreiack Nadine and Peter Ay (Germany)**
140-SS-II	The differences the nature of protective challenges posed by natural and artificially motivated environmental hazards to obligations in Article 11 of the Convention on the Rights of Persons with Disabilities (CRPD). **Mugabi Ivan (UK)**

SESSION II Time : 02.00 PM to 03.30 PM **Science & Technology** : **ST** (Technology + Physical sciences + Life sciences)	
Chairperson	**Dr. S. K. Mahmood , Hyderabad (India)**
Co-ordinator	**Dr. Jyothi Roopa, Bengaluru (India)**
Invited speaker	**Professor Dr. D. K. Pal , Lae (Papua New Guinea)**  **Biography** Professor Dr. Dilip Kumar Pal is a Professor & Head, Department of Surveying & Land Studies, University of Technology, Private Mail Bag, Lae, Papua New Guinea. Born in India, Professor Pal was Founder Coordinator & Head – Department of Remote Sensing & GIS, Vidyasagar University, Midnapore, West Bengal, India. He has also worked as Scientist-E, D and C at Indian Space Research Organisation, Government of India. He is also Life Member of Indian Society of Remote Sensing, Dehra Dun, India, Indian National Cartographic Association, Hyderabad, India and Indian Geographical Society, Kolkata, India. Over 36 years of Research and Teaching Experience, Professor Pal has about 140 scientific publications in the field of Remote Sensing and GIS in the study of physical environment and its impact on socio-economic domain. **Title :** Climate change scenario : International response **Abstract** The paper primarily concentrates on the anthropogenic triggers and the politics of climate change. How various nations rise to the occasion through decoupling their green house gas emissions from primary energy consumption and GDP growth is focus of discussion. Continued anthropogenic emissions by various nations especially through 'energy consumption' and 'land use land cover change' pose significant threat to the endeavour of containing rise of global temperature within the IPCC caveat of 2°C. Pre-industrial revolution CO_2 concentration of below 350 ppm to '400 ppm in sight today' is a clear indication of the necessity of International communities to take far more proactive steps to arrest the pernicious impacts. Decoupling of emissions and primary energy consumption is happening at a reasonably rapid pace and also same is the case with emissions and GDP growth. Whether the reduction in growth rate of CO_2 emission is enough to keep the global temperature rise within a cap of 2°C warming (significance of COP21 in Paris, Dec'15) is deliberated. The current world economic scenario has already taken heavy toll on the fossil energy price by reducing the demand and at the same time prevailing glut in the world market place through excessive supply by some countries with a vested interest to preclude the menace posed by shell gas fracking enterprises. This situation has complicated the development of Renewable Energy (RE), the price advantage of conventional fossil fuel energy is stipulated to impair the growth and development of RE regime. Without a clear political consensus within the G20 countries on the decoupling of CO_2 emission from primary energy consumption and GDP growth, the world will not have the desired, sustainable plateau of emissions in coming years. Interestingly anti-Coal development is now taking place in China and US. Silver lining is that the two most polluters of the world US and China have made a joint declaration to name a date for emissions peak. It is for the initial pioneer EU to follow the suit. Being an insignificant emitting country of GHG, Papua New Guinea (PNG) has been at the receiving end / victim of climate change consequences inflicted by the world's biggest polluter countries. PNG specific factors eg. Anthropogenic fiddling /land use change continues because of weak state control emanating from the fact that forests and rivers are virtually owned by landowner groups in PNG, the implications of which were elaborated in the face of state's inability to take eco-friendly stern actions / climate change mitigation and adaptation.
	PAPER PRESENTATION
017-PS	Concentration of fluoride in groundwater and its distribution in Narmada district at Gujarat, India **Tarunkumar M. Patel, Chetan Sangani, A. M. Patel and Rakesh Ameta (India)**

022-LS	Effect of different liquid media on growth and sclerotial formation *in vitro* and eco-friendly bio-efficacy of stem canker of pigeonpea caused by *Macrophomina phaseolina* **D.M. Pathak and Mulji Jehani (India)**
087-PS	Equilibrium, kinetic and thermodynamic study of adsorption of Erythrosine-B from aqueous solution by activated carbon from Black Gram Husk (*Vigna mungo* L). **B. Jeyaraj, S. Valliammai Y. Subbareddy and K. S. Nagaraja**
207-T	Hybrid systems to manage renewable energy resources **Pushpa Agrawal and Sachin S. Bharadwaj (India)**
200-PS	Analysis of land use, biomass and net primary productivity in dry tropical forest using satellite data **Tarun Kumar Thakur (India)**
043-LS	Silk thin film for cell and tissue growth **Sampratha B., Prakash M. Navale, Thippa Reddy K.S. and Pushpa Agrawal (India)**
175-PS	Preparation of nanowire PtRu on dextran for proton exchange membrane fuel cell **Thirawudh Pongpayoon and Montira Saneewong-Na-Ayutthaya (Thailand)**
SESSION II Time : 02.00 PM to 03.30 PM **Social Science** : **SS** (Social Sciences + Law & Management)	
Chairperson	**Dr. Manju Dubey, Mandla (India)**
Co-ordinator	
Invited speaker	**Professor Dr. Christoph Külls, Luebeck (Germany)**  **Biograpghy** Professor Dr. Christoph KÜLLS is a Full Professor at University of Applied Sciences Lübeck, Civil Engineering Department, study coordinator of the English Master Environmental Engineering. He is acting Professor for Environmental Hydrology, giving courses on hydrology, groundwater hydrology, water chemistry and solute transport. Professor Kulls is a hydrologist, specialized in dryland hydrology and groundwater hydrology, especially of Southern Africa, having 20+ years of experience in international projects on water resources, hydrology and groundwater hydrology, development, coordination and participation as expert hydrologist in several major international research projects (GREM, WAVES, GRC, Guarani, WADE, SEA), several national water resources assessment programs in Cyprus, Jordan, Burundi, Rwanda and namely in Namibia, experience and professional expertise in the fields of hydrological modeling, groundwater, water resources assessment, environmental tracer hydrology and water quality. He has also supervision of more than 40 master thesis projects, teaching hydrology and groundwater hydrology courses, several major projects of water resources assessment (Namibia, South Africa, Spain).Research assistant for Hydrology at the University of Freiburg. **Title :** The role of environmental engineers in reaching sustainable development goals : The way forward **Abstract** The international community represented by the United Nations has defined 17 sustainable development

	goals to transform our world. Development goals range from societal challenges such as poverty reduction, nutrition and health to cross-cutting and integrating targets like climate action, life below water and on Earth, peace and cooperation. The sustainable provision of clean water and sanitation on the one hand and the production of affordable clean energy can be considered pivotal actions. Water and energy are generic resources needed for the production of food and economic development. Environmental engineers play a key role in achieving sustainable development goals: Innovative and new engineering designs in the water and energy sectors are needed to increase water use efficiency, reduce pollution and provide renewable and clean energy with minimal collateral impact on other resources. In order to achieve these goals, environmental engineers need to realign and focus their activities and interdisciplinary cooperation according to five key principles : (1) Engineering needs to integrate the environment into the design process, operation and life-cycle assessment. Instead of designing stand-alone storages, natural storages such as aquifers need to be integrated. Instead of an isolated engineering design, engineering needs to become a supporting element of environmental systems. (2) Engineering designs need to integrate the users and societal impacts. The human user needs interfaces and interaction with environmental designs, the impact and benefit of engineering need to be part of the design. (3) Environmental engineering needs to be entropy minimal, thermodynamically economic and resource-efficient. In times of energy awareness, designs cannot be evaluated regardless of their footprints on the environmental systems they are embedded in. (4) Environmental engineering solutions need to be connected and responsive. A new era of swarm designs, integrated and inter-connected systems is to begin with the internet of things and production 4.0. and finally (5) environmental engineering designs need to be scalable, reproducible and evolutionary. Living in an open knowledge society, cooperative design, open source principles and evolutionary development by generations of communities designing products will have a stronger role. Education and research play a key role in this last aspect and make environmental research and engineering sustainable and lasting. Working along these five lines, the community of environmental engineers can play a key role in reaching the sustainable development goals.
	PAPER PRESENTATION
054-SS-I	Water resources in India and sustainable solutions for use, conservation and protection of water : A Socio-legal study **D. Gopal , R. Thippa Reddy and J.N. Sharma (India)**
067-SS-I	Nature Management : A viewpoint (in context to Ancient Indian History) **Ajay Pal Singh and Ajay Sinha (India)**
070-SS-I	Evaluating management practice to determine productive capability of irrigated and non-irrigated rice farms in Patigi, Nigeria **OLABODE Abiodun Daniel (Nigeria)**
072-SS-I	Personality dimensions as determinants of emotional intelligence among selected nurses in Southwest, Nigeria **Ibikunle Imisioluwa O. and Akinnawo Olutope E. (Nigeria)**
032-SS-I	Nutrition transition in Indian context **Reshma Lakesh, Padmini Sambhakar and Rimsha Lakesh (India)**

091-SS-I	Participatory vulnerability analysis of watershed development programmes as a basis for climate change adaptation strategies in Kerala, India **R. S. Archana, Breuer L. and Aenis T. (Germany)**
SESSION III Time : 04.00 PM to 05.30 PM **Science & Technology** : **ST** (Technology + Physical sciences + Life sciences)	
Chairperson	**Dr. B. C. More, Maharashtra (India)**
Co-ordinator	
Invited speaker	**Dr. Rabidyuti Biswas, New Delhi (India)**  **Biography** Dr. Rabidyuti Biswas is Head of the Department of Physical Planning, School of Planning and Architecture, New Delhi, India. He did his graduation in Civil Engineering and post graduation in Regional Planning from IIT Kharagpur and Ph. D. from IIT Roorkee. He worked as Assistant Town and Country Planner with Government of India for around two years and joined as faculty in School of Planning and Architecture, New Delhi from 1996. He is engaged in teaching, research and consultancy in field of Urban and Regional Planning, Infrastructure Planning and Management for more than 20 years. He guided many undergraduate, post graduate and Ph. D. thesis in the field of physical planning. He presented many technical papers in international and national conferences and workshops and visited almost all major cities in India and Amsterdam, Durban and Peru in abroad. He has published around 20 technical papers in international and national journals. He is also member of editorial board of one international journal and fellow member of Institution of Town Planners, India and International Congress of Environmental Research and active member of other related professional bodies. **Title :** Residential typology and water management options for urban area **Abstract** Water scarcity is matter of concern in almost all urban areas in India. The gap between supply and demand is increasing constantly. This gap is not only due to actual physical shortage of water but also due to the miss management of the scarce water resources in these urban settlements. The predominant use of water in urban area is domestic use. There are many sustainable water management approaches for residential development in urban area. But hardly these approaches are applied in these residential areas in India. There are different types of housing options in these residential developments which are proposed by the development plan or master plan of these urban areas. The water management approaches for these different types of housing typology cannot be uniform. Different types of housing developments have different responses for the applicability of different water management approaches. The applicability of few selected water management approaches are first established based on the literature study, primary survey analysis and the personal interaction with the selected household in different residential developments in Dwarka. The space requirements and water saving due to the application of these water management approaches are estimated for selected residential case study to understand the suitability of these water management approaches. Finally, this paper suggests the type of housing which is more suitable for efficient water management in urban residential development.
	PAPER PRESENTATION
002-PS	Utilization of dairy processing waste for value addition **Hend G.M., Sapkal R.S., Hirgude D.N. and Mehta A.R. (India)**

170-PS	Removal of lead ions in aqueous solution using cashew nut shell-derived adsorbent **Rapeeporn Phromrak, Wikanda Saengngoen and Kamchai Nuithitikul (Thailand)**
057-LS	Medicinal plants of controlled grazing area of ICAR- Central Sheep and Wool Research Institute Avikanagar and their traditional human use **R. B. Sharma, S. C. Sharma and B. Sharma (India)**
059-PS	Water quality status of surface water in Korba District, Chhattisgarh, India **M. M. Vaishnav, R. Janjayala, P. K. Rahangdale, M. Hait and S. Dewangan (India)**
060-LS	Impact on soil and cultivated vegetation due to sewage fed irrigation in Byranmangala reservoir command area, Karnataka, India **K.V. Lokesh , H. Chandrashekar, Joythi Roopa and G. Ranganna (India)**
064-PS	An investigation on removal of fluorides from fluoride rich drinking water using low cost adsorbents **G. P. Desai, H. B. Aravinda and S. Suresh (India)**
061-LS	Enhancement of *Spirulina platensis* growth using coconut water supplemented media **Bhargav D. Sanketi, Arpit M. Kothari and A. H. Manjunatha Reddy (India)**
SESSION III Time : 04.00 PM to 05.30 PM **Social Science** : **SS** (Social Sciences + Law & Management)	
Chairperson	**Dr. S. S. Patole , Maharashtra (India)**
Co-ordinator	**Ms. Archana R. Sathyan , Giessen (Germany)**
121-SS-I	Determinants of the health problems of the elderly in rural Areas : A Case Study of Kabba/Bunu Local Government Area, Kogi State, Nigeria **Ismail N. Adeiza and Boluade Bamitale (Nigeria)**
126-SS-I	The green initiative at Royal Orchid, Mumbai, India **Vaishnavi Palsuledesai and Louiza Rodrigues (India)**
127-SS-I	Mangroves in Mumbai : Role of Soonabai Pirojsha Godrej Marine Ecology Centre (SPG) in its conservation **Maithili Sawant and Louiza Rodrigues (India)**
141-SS-I	Role of administration for restoration and management of parks : An Indian perspective **Kshama Pandey (India)**
056-SS-II	Ignominious property rights instigates freshwater crisis **Amrisha Pandey (UK)**
047-SS-I	Paleoclimate modeling : An approach topaleoclimate in Central Java, Indonesia, based on foraminifera fossil assemblage **Destyo Prabowo, Alvin Adam Arifin and Benyamin Perwira Shidqi (Indonesia)**

Day Two : 28 July 2016

PARALLEL ORAL PRESENTATIONS in Respective Seminar Halls

SESSION IV Time : 09.00 AM to 10.30 AM

Science & Technology : **ST** (Technology + Physical sciences + Life sciences)

Chairperson	**Dr. B. C. More, Maharashtra (India)**
Co-ordinator	**Dr. A. H. Manjunatha Reddy, Bangalore (India)**
Invited speaker	**Professor Dr. Ajay K. Mishra, Johannesburg (South Africa)**  **Biography** Professor Ajay Kumar Mishra, completed his Bachelor's and Master's degrees in Chemistry at Purvanchal University, India. After pursuing M.Phil and Ph.D. degrees in "Bio-inorganic Chemistry" at the Department of Chemistry, University of Delhi, India, he was awarded postdoctoral fellowships in South Africa. In October 2009, based on excellence in research and valuable research contributions, he was offered Senior Lectureship in the Department of Applied Chemistry, University of Johannesburg (UJ), South Africa. In recognition of his significant achievements and excellent research profile he was promoted to Associate-Professor in 2011. He worked in this capacity at UJ until December 2014. Recently, he has been appointed Professor at the Nanotechnology and Water Sustainability Research Unit, Florida Science Campus, University of South Africa. The main objective of his research group is the multidisciplinary approach toward the development of nonmaterial's and their relevant applications. He is involved in supervision/co-supervision of master's and doctoral students, as well as postdoctoral fellows. His research group has produced a number of publications in national and international high quality peer-reviewed journals and has made numerous presentations at national and international journals/conferences. Professor Mishra is a Fellow, International Congress of Environmental Research. **Title :** Smart composites for environmental applications **Abstract** Smart materials have been a thrust area to the researchers in the development of new materials that lead to create new tools and techniques which will help in the development of advance technology."Smart materials" have been extensively used in a variety of applications due to the change in the characteristics of the materials with small variation on stimuli. They are also known as responsive materials. Smart materials change their properties abruptly in response to small changes in the environmental conditions such as pH, temperature, electric and magnetic fields. Smart materials have been used to develop more cost-effective and high-performance water treatment systems as well as instant and continuous ways to monitor water quality. Smart materials in water research have been extensively utilized for the treatment, remediation and pollution prevention. The focus of the talk will be the recent advancement and development of the smart composites for the environmental applications.
	PAPER PRESENTATION
068-PS	Removal of fluoride by using Citrus limon peel powder as natural coagulant **Kothapalli Bonnoth Chandra Sekhar, N. Gandhi and D. Sirisha (India)**
069-LS	Assessment of airborne fungal concentration in different industrial environments of Davanagere city, Karnataka, India **S. Thirumala and H.B Aravinda (India)**

079-LS	Polyhydroxy alkanoates producing novel *Bacillus* sp., skm123 isolated from polluted pond water **S. K. Mahmood and K.Chaitanya (India)**
077-PS	Elimination of organic matter present in the leachate with Fe(III) **Khadija Aaouine and Ahmed El Yahyaoui (Morocco)**
146-LS	Biodegradable eco-friendly dishware from leaf biomass **Pushpa Agrawal, Prakash M. Navale and Thippareddy K. S. (India)**
148-PS	Ion exchange properties of lead selective composite cation exchanger grapheme Th(IV) phosphate **Inamuddin**
211-PS	Understanding effects of corrosive sulphur on transformers insulation by different chemical techniques **H. Ramachandra, Akshatha A. and J. Sundara Rajan (India)**
SESSION IV Time : 09.00 AM to 10.30 AM **Social Science** : **SS** (Social Sciences + Law & Management)	
Chairperson	**Dr. Kshama Pandey, Bhopal (India)**
Co-ordinator	**Dr. Reshma Lakesh, Bhilai (India)**
Invited speaker	**Professor Dr. D. Gopal, Chennai (India)**  **Biography** Professor Dr. D. Gopal is presently holding the position of Director, P.G. Studies and Head of Department of Environmental Law in the Tamil Nadu Dr. Ambedkar Law University, Chennai, India. He has served as Dean in the School of Excellence in Law, the Tamil Nadu Dr. Ambedkar Law University and acted as Chairman for Law Admissions for LL.B. and LL.M. courses in Tamil Nadu, India. He was the Principal at the Tamil Nadu Dr. Ambedkar Law University's Law College at Chengalpet, Tamil Nadu, India and also the Principal of Sri R.K.M. Law College, Chittoor, Andhra Pradesh, India. He was the Chairman of the Board of Studies in Law for the said University. Professor Gopal has organised number of national and international conferences at Environmental Law University. He has also visited various Universities in Thailand, Malaysia and Sri Lanka and presented research papers on various subjects of environmental law. Several of his research articles have been published in the national and International Journals. **Title :** Urbanization – Impact on Urban Environment : An approach for sustainable urban development **Abstract** Urbanization is a process of socio-economic change in which drastic changes and developments would be brought about in socio-cultural roles, socio-political approaches, Technological Knowhow, industrial and labour relations, habits, attitude and values of the people. Though this change is indicative of dynamism of developing society, it creates various economic, social, legal and political problems. Urbanization is not a phenomenon peculiar only to a particular nation but it is a global phenomenon. The impact of urbanization on urban environment is a matter which has to be discussed on intensive scale. The legal measures adopted to tackle the problems of urbanization in the past are very few and at present it requires a comprehensive and integrated legal mechanism to meet the growing situations of urbanization. The faster rate of economic growth coupled with the natural growth of urban population has resulted unprecedented expansion of urban areas. The migration of population from rural areas to urban areas has brought the problems of slums and squatter settlements, pressure on public health service, transport, housing and community facilities. Agrarian reforms, Industrialization and technological developments have created land, air, water and climate related environmental issues. All these call for the sustainable

	urban development with well-conceived policies for regulating urban growth with regard to urban land use, urban slums, housing, industrial licensing, town and country planning. The paper highlights the problems of urbanization and its impact on urban environment and suggests suitable solutions for sustainable urban development and growth.
	PAPER PRESENTATION
157-SS-I	Assessment of academic research utilization for development in field of environment **Jagul Huma Lashari and Arabella Bhutto (Pakistan)**
183-SS-I	Geotechnical characterization of benin formation on road failure in parts of Umuahia region, Nigeria **Eneche, Patrick Samson Udama (Nigeria)**
199-SS-II	E-waste management in India : Legislation and implementation **Kriti Pradhan, Smriti Pradhan and Alka Pradhan**
215-SS-I	Challenges of agro forestry systems' adoption by farmers in the North Central Zone of Nigeria **Saliu O.J., Oluwagbemi T. and Ifatimehin O.O. (Nigeria)**
SESSION V Time : 11.00 AM to 12.30 PM **Science & Technology** : **ST** (Technology + Physical sciences + Life sciences)	
Chairperson	**Dr. Maya Shedpure, Raipur (India)**
Co-ordinator	**Dr. M. M. Vaishnav, Korba (India)**
Invited speaker	**Professor Dr. Pushpa Agrawal, Bangalore (India)**  **Biography** Professor Pushpa Agrawal completed her Ph.D. Degree in the year 1984 from DAVV, Indore, India and Post-doctoral studies from Miami University, USA and Indian Institute of Science, Bangalore, India. She is Professor and Head, Department of Biotechnology at R.V. College of Engineering Bangalore, India. Many Scholars are pursuing and completed Ph.D. under her guidance. She has presented over 100 research papers in conferences and published more than 50 papers in reputed journals. Prof. Pushpa has received many research grants from government and non-government agencies to carryout research and innovation. She has developed various products and technologies which are under patent as intellectual property and technology transfer. She has authored a book on Biotechnology and chapters in 2 books and has been serving as Managing Editor and Editorial Board Member of reputed journals. She has received various awards, honors and fellowships. Professor Puspha is a Fellow, International Congress of Environmental Research. Best teacher and research gold medal awardee, Professor Pushpa has been the founder of Green campus group of the college having more than 100 faculty and students working for environmental issues. **Title :** Antimicrobial, active, intelligent and biodegradable packaging material from lignocellulosic biomass **Abstract** The response to the dynamic changes in current consumer demand and market trends, the area of active packaging is becoming increasingly significant. An antimicrobial active packaging material can be made by incorporating and immobilizing antimicrobial agents into food packaging material and applying a bio-switch concept. By that, the mechanism of antimicrobial release between the developed bio-switch

	particles and the stimulus of a microbial contamination can be studied. The objective of this research is to synthesize and analyzed lignocellulose-based film incorporated with antimicrobial agents including lysozyme and EDTA. Glycerol, a byproduct of biodiesel manufacture was used as a plasticizer for the synthesis of the films. The process includes microbial digestion of sugarcane bagasse, partial purification of lysozyme from egg white, optimization of the antimicrobial concentrations to be incorporated into the lignocellulose films and the casting of antimicrobial lignocellulose films. The inhibition of bacterial growth was examined using the liquid culture test. The films were characterized using Atomic Force Microscopy, Contact Angle Goniometry and Tensile Strength measurements. Surface characterization of the developed active films indicated smooth and homogenous topography and they showed increased hydrophobicity with the incorporation of glycerol as plasticizer. Tensile strength tests indicated increased tensile strength with the addition of glycerol and the tensile strength of the developed active packaging material was comparable to that of conventional polyethylene packaging material.
	PAPER PRESENTATION
082-PS	Seasonal variations in surface water quality of Narmada river due to sewage effluent from different sources at Narmada town, Near Jabalpur city, Madhya Pradesh, India **Manju Dubey (India)**
171-LS	Difference in biomass of the species *Cupressus arizonica* affected by zinc metal and zinc affected in environmental health on human society **Seyed Armin Hashemi and Somayeh Rahimzadeh (Iran)**
085-PS	Assessment of trophic status of Arkavati reservoir Kanakapura Taluk, Ramanagar District, Bangalore, India **Jyothi Roopa S.K., Lokesh K.V., Puttappa C.G., Chandrashekar H. and Ranganna G. (India)**
174-LS	Studies on control of bird pests to damage millet crops in semiarid zone of Northern Gujarat, India **Patel K. B. (India)**
136-PS	Micro-structured iron (III) hydroxide agglomerates with high porosity as adsorbents **Peter Ay, Claudia Glaser, Florian Logsch, Satyanarayana Narra, Bernhard Gemende, Anja Gerbeth, Nicole Pausch, Matthias Leiker and Rene Heiduschke (Germany)**
159-PS	Effect of treated waste water on strength of concrete **Parijatha N. and Sumithra Devi K. A. (India)**
222-PS	Postmonsoon evaluation of surface water with reference of statistical parameters of Korba District, (C.G.) India **M. M. Vaishnav, D. Sinha, R. Janjayala and S. Krishnamurthy (India)**

Paper presentation through conferencing

27 July 2016 at 4:00 PM to 4:10 PM

098-T	CRISPR : Site specific cleave **Anusha Muralidhar, Pushpa Agrawal and A.H. Manjunatha Reddy (India)**

Note : Minute-to-minute scientific paper presentation schedule as stated above is provisional. Organizing committee reserves the right to make essential changes in the Schedule at any time.

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Institutions under RSST

Year	Institution
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1948	R V Boys High School
1950	R V Shishu Vihar
1954	R V Teachers College including PG Centre
1954	R V Teachers Training Institute
1962	R V Girls High School
1963	R V College of Engineering
1971	NMKRV PU College for Women
1973	NMKRV College for Women & PG Centre
1974	Shashwati (A museum)
1982	SSMRV PU College
1982	SSMRV Degree College
1990	R V Integrated School for the Disabled
1992	RV Dental College & Hospital
1992	RV Centre for Manufacturing Research &Technology Utilization
1992	RV Educational Consortium
1996	RV Institute of Sanskrit and Gandhian Studies
1996	RV Institute for Social Service and Skill Promotion
1997	RV- TIFAC Composites Design Centre
1999	RV Public School
1999	RV Institute of Management
1999	Foundation for Clean Energy & Environment
2003	RV College of Nursing
2003	RV College of Physiotherapy
2007	RV VLSI Design Centre
2007	Centre for Cognitive Technologies
2008	RV PU College

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