

Report on the 2nd Regional Science & Technology Congress (Western Region), 2017 [2nd RSTC(WR) – 2017]

The 2nd Regional Science & Technology Congress (Western Region), 2017 [2nd RSTC(WR) – 2017] was jointly organized by the University of Burdwan (BU) and the Department of Higher Education, Science and Technology and Biotechnology (DHESTBT), Government of West Bengal (GoWB) during November 16-17, 2017 with financial assistance from the DHESTBT, GoWB. The primary goal of the congress was to provide a forum for Scientific Research, especially for young



scientists as well as to synergize new ideas with societal needs.

Prof. Goutam Chandra, Department of Zoology, The University of Burdwan and Dr. Ashish Kumar Banerjee, Senior Scientist, DHESTBT, GoWB were the Organizing Secretaries of the congress. The event had been successfully completed under the adept guidance of Prof. Nimai Chandra Saha, Hon'ble Vice Chancellor of the University of Burdwan. Shri Swapan Debnath, Hon'ble Minister of State, Department of Animal Resources Development (Independent Charge) and Industry,

Commerce & Enterprises (Textiles & Handloom), GoWB inaugurated the congress at the Snaskriti Lokmancha, Burdwan on November 16, 2017 sharp at 10:30 am. The Inaugural Session was presided over by Prof. Nimai Chandra Saha, Hon'ble Vice Chancellor of the University of Burdwan. Dr. Amalesh Mukopadhyay, Head, R & D Infrastructure, DST, Government of India, New Delhi, Prof. Samir Bhattacharya, INSA-Golden Jubilee Research Professor, School of Life Science, Visva-Bharati, Sri Anurag Srivastava, District Magistrate & Collector, Purba Bardhaman and several others were present on the dais as Special Guests. In his inaugural speech Shri Debnath urged the scientists to take the fruits of science to every nook and corner of the society. Prof. Saha, in his presidential address, emphasized on cultivating science in mother tongue. He also emphasized on the motivation of students, researches and faculties to welcome the new age of science. Prof. Saha told that Science Congress should focus on the rural society and aims at making the school students



aware of the importance of science & technology in



their daily life. He expressed his hopes that the 2nd RSTC (WR), 2017 would identify new directions of research in science & technology for enabling us to live a safe and peaceful life. The inaugural session was just followed by the Jagadish Chandra Bose Memorial Lecture – a half an hour lecture on *Diabetes* delivered by Prof. Samir Bhattacharya on the inaugural dais which gave a luminous beginning of the Technical Sessions of the congress. Immediately after it, a panel discussion on “the role of media in popularizing science” was organized by the Department of Mass Communication, The University of Burdwan under the chairmanship of the Hon’ble Vice Chancellor of the University of Burdwan. Department of Mass Communication, The University of Burdwan also published a special edition of ‘The Communique’ dedicated to the 2nd RSTC(WR), 2017.

Over 700 participants were registered in the congress. There were twelve disciplines covering all branches of Science & Technology - Physics, Chemistry, Mathematics, Medical Science, Environmental Science, Earth Science, Botany, Zoology, Physiology, ‘Agriculture-Fisheries and Animal Science’, Engineering, ‘Social Science, IPR

and others’. An overwhelming response was received from the scientific fraternity in and outside the state of West Bengal. The organizers received 433 abstracts, spread over twelve disciplines, which were published in the ‘Abstract Volume’ of the congress. Authors of all those 433 abstracts were called for presentation at the RSTC (WR), 2017. All Technical Sessions were held at Golapbag, the academic campus of the university. Technical Sessions consisted of paper presentation (in Oral and Poster forms), Science Exhibition and Invited Lecture. Paper Presentation and Science Exhibition continued for both the two days. In Science Exhibition, attractive scientific models were presented by the students from schools, colleges and universities. Eminent scientists were invited to select the three best presentations and the three best scientific models. At the end of the day 1, participants, specially from student community



under the leadership of faculty members, were presented an illuminating cultural programme. At the beginning of day 2, four notable scientists delivered Invited Lectures on some emerging topics of science and technology which were praised by the audience.

The event “Meet the Scientists” was held at the Snaskriti Lok Mancha, Burdwan on day 2. It received a unique and unprecedented response. Besides the participants of 2nd RSTC (WR), 2017, a number of common people from the society took part in that event. The Hon’ble Vice Chancellor was coordinating that event. Renowned scientists like Dr. Amalesh Mukhopadhyay, Prof. Gobinda Chandra Sadhukhan, Prof. Barindra Kumar Ghosh, Prof. Goutam Chandra, Prof. Debidas Ghosh, Dr. Prabal Kumar Chakraborty, Dr. Gispati Chakrabarti and others were on the dais for responding the queries of the audience. They lucidly explained those queries.

The Valedictory Session was chaired by Prof. Nimai Chandra Saha, Hon’ble Vice Chancellor of the University of Burdwan. Prof. Asish Kumar Banerjee, Hon’ble Minister in Charge, Department of Agriculture, GoWB, Prof. Soumen Kumar Mahapatra, Hon’ble Minister in Charge, Department of Water Resources Investigation and Development, GoWB, Sri Shyamal Santra, Hon’ble Minister in State, Department of Panchayat and Rural Development and Public Health Engineering, GoWB and Sri Kunal Agarwal, IPS, Superintendent of Police, Purba Bardhaman were present as Special Guests. In his address, Prof. Banerjee thanked the University of Burdwan for successfully organizing the congress which involved huge gathering. Prof. Mahapatra opined to take science from laboratory to the farmland, while Sri Santra was much enthusiastic about the development of science in the state of West Bengal. The Hon’ble Vice Chancellor

proposed to publish the scientific thesis in Bengali for understanding of the common people. While talking about the organization of the congress, majority of the participants opined that the congress was well-organized in all respects. On behalf of the Organizing Committee, Dr. Deb Kumar Panja, Registrar of the University of Burdwan expressed his gratitude and gratefulness to DHESTBT, GoWB, the University authority, officers, different office bearers, students and the participants of the congress for their active participation and whole-hearted cooperation.



At the end of the Valedictory Session, medals and certificates were awarded to the best paper presenters and best model presenters by the dignitaries on the dais. Fifty eight prizes (1st, 2nd and 3rd for best oral presenters and 1st and 2nd for best poster presenters in twelve disciplines) were awarded to the best paper presenters and nine prizes (1st, 2nd and 3rd from schools, colleges and universities), to the best scientific model presenters (vide the elaborative list attached herewith as Annexure I).

**Prof. Goutam Chandra & Dr. Ashish Kumar Banerjee
Organizing Secretary, 2nd RSTC (WR), 2017**

2nd REGIONAL SCIENCE & TECHNOLOGY CONGRESS (WESTERN REGION), 2017
[2nd RSTC (WR), 2017]

RESULT SHEET

Following is the list of participants who have been awarded 1st/2nd/3rd positions in various events of the 2nd RSTC (WR), 2017 held at The University of Burdwan during November 16-17, 2017. Participants whose names appear in this list are asked to visit the website "www.vigyanchetana.in" for further proceedings in this regard.

SCIENCE MODEL COMPETITION

SCHOOL			
			RANK
1.	RounalBasak Dibyangana Mishra Chandreyee De Soumit Ray	<u>Mobile Microscope</u> Delhi Public School	1st
2.	Aniket Nandi SubhadeepNandy	<u>Saw SwachhaYaan</u> DAV Model Schhol, Durgapur	2nd
3.	SouranshuSingha Samanwaya Chakraborty Sagar Chandra Mirza Munjar Mahammad	<u>Autoluminating Hydraulic Bridge</u> Burdwan Municipal High School	3rd
COLLEGE			
1.	Saheli Dutta Subhasree Dutta SmritikanaBandopadhyay	<u>Smart City</u> MUC Women's College, Burdwan	1st
2.	Sankha Ghosh SubhadipGhorui	<u>Green Home</u> AKPC Mahavidyalaya	2nd
3.	ChiranjitMajhi	<u>3D- Hologram</u> Bankura Christian College, Bankura	3rd
UNIVERSITY			
1.	Bapi Sarkar Biswajit Biswas Anindya Roy	<u>Gene Editing and Stem Cell Therapy</u> Deptt of Zoology, BU	1st
2.	SkMirjan Saptarshi Ghosh	<u>Mosquito and Black Hole</u> Deptt of Environment Science,	2nd

		BU	
3.	Kalyan Kumar Banerjee Pramathanath Chakraborty Santanu Pal	<u>The Gravitational Waves</u> Deptt of Physics, BU	3rd

POSTER PRESENTATIONS

Agriculture-Fisheries and Animal Science (AS): <u>POSTER</u>			
Sl no.	Abstract no.	Title of abstract and Name(s) of the author(s)	RANK
1	AS-P4	Experiences of betel vine culture – a source of livelihood at Panskura-I Block, PurbaMedinipur - Shyamal Dogra* and Harendranath Dogra	1 st
2	AS-P2	<i>In vitro</i> cytotoxic and antiproliferative effects of aerial parts' aqueous extract of <i>Ampelocissuslatifolia</i> (Roxb.) Planch. on Dalton's lymphoma cells - Anwesa Chaudhuri* and Sanjib Ray	2 nd
BOTANY (BO)			
3	BO-P12	Gene, genome, genomics of <i>Bacillus altitudinis</i> Strain SORB11- UrmiHalder* and RajibBandopadhyay	1 st
4	BO-P27	Amaranth of Gangetic West Bengal: A subsidiary food crop with enriched antioxidant potential for prevention of degenerative disease - Debasmita Sen* and Soumen Bhattacharjee	2 nd
CHEMISTRY (CH)			
5	CH-P1	Room temperature one-pot synthesis of a new series of diverse indole-uracil molecular hybrids using sulfamic acid as an organocatalyst in water – Sanchari Begam* and Goutam Brahmachari	1 st
6	CH-P4	Relative reactivity order of thiourea and thioglycolic acid towards diaquachloro-tris-(dimethylsulfoxide)ruthenium(ii) ion in aqueous medium: a mechanistic view point - Animesh Chattopadhyay* and Alak K Ghosh	2 nd
EARTH SCIENCE (ES)			
7	ES-P7	Palaeochannel identification using land holding pattern and its association using RS & GIS: A case study from selected areas of southern part of West Bengal - Sadhan Malik* and Subodh Chandra Pal	1 st
8	ES-P8	Rivers degeneration by opencast coal mining: A remote sensing and GISs based study of Raniganj coalfield, India - Sourav Mukherjee* and Deb Prakash Pahari	2 nd
Environmental Sciences (EN)			
9	EN -P2	Impact of urbanization on green patch dynamics of Burdwan Municipality, West Bengal, India - SunandaBatabyal*	1 st

		Ayan Mondal, Rituparna Banerjee, Sohini Gangopadhyay and Sudipto Mandal	
10	EN -P9	Predicted equations of the pulmonary function of school going children using spirometry data - Suraj Ghosh*, Rumi Rabha, Mallika Chowdhury and Pratap Kumar Padhy	2 nd
Engineering Sciences (EG)			
11	EG-P1	12V DC pico hydro for hilly rural electrification: performance analysis by C.F.D. – Priyabrata Adhikary*, Susmita Kundu, Asis Mazumdar	1 st
12	EG-P12	Gravity: A global real-time autonomous vehicle intelligent tracking yosemite system - Dipnarayan Das* and Sumit Gupta	2 nd
Mathematics (MA)			
13	MA-P5	Fate of an accretion disc around a black hole when both the viscosity and dark energy is effecting - Sandip Dutta*	1 st
14	MA-P2	Relations and of scale factor for different dark energy models with time: A brief analysis - Promila Biswas*	2 nd
Medical Sciences (MS)			
15	MS-P5	Preparation and evaluation of Ibuprofen solid dispersed tablets for enhanced dissolution rate - Debraj Dey* and Sreejan Manna	1 st
16	MS-P9	A comparative study of antibody titres in “O” blood group population of north east and eastern Indian population - Sohan Roy*, Pranjal Dutta, Parbati Saw, Ipshita Nag and Krishnendu Adhikary	2 nd
Physics (PH)			
17	PH -P5	Solventless synthesis of hematite nanoparticles – Anubha Dey* and Ashis Bhattacharjee	1 st
18	PH -P8	Cation distribution, microstructure characterization and optical properties of mechanosynthesized mixed spinel type Zinc aluminate nanoparticles - G. Maity* and S.K. Pradhan	2 nd
Physiology (PG)			
19	PG-P6	<i>Jussiaea repens</i> prevent the Alloxan induced diabetes mellitus – A biochemical study - Tasneem Khandekar*, Ayon Roy, Soumitri Bhowmik, Maitrayee Mukherjee, Nirmal Pradhan, Indrani Chakraorty, Subhasish Ghosal and Pranabesh Chakrabarty	1 st

20	PG-P1	Possible hepatoprotective effect of <i>Cocciniagrands</i> against mono sodium glutamate (MSG) mixed high lipid diet (HLD) induced changes in rat model - Arnab Banerjee* , Debasmita Das , Ankita Bhattacharjee , Sandip Mukherjee and Bithin Kumar Maji	2 nd
Social Science and IPR (SI)			
21	SI-P10	Status of Maternal Risk Factors in Murarai-I C.D.Block, Birbhum District - Alokananda Ghosh* and BiswaranjanMistri	1 st
22	SI-P1	Able bodies and companion species: re-thinking animals in children Hollywood movies – Suranjana Bhadra*	2 nd
Zoology (ZO)			
23	ZO-P4	A study on the seasonal fluctuation of some physicochemical parameters of <i>Aedesalbopictus</i> breeding habitat water - Arunima Chakraborty* , Soumendranath Chatterjee and Nimai Chandra Saha	1 st
24	ZO-P5	Factors Affecting Larvicidal Activity of <i>Bacillus thuringiensis</i> against Filarial vector <i>Culexquinquefasciatus</i> - Sucharita Ghosh* , Arnab Chatterjee , Syed Afrin Azmi , Soumendranath Chatterjee and Nimai Chandra Saha	2 nd

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ORAL PRESENTATION

Agriculture-Fisheries and Animal Science (AS): <u>ORAL</u>			
Sl no.	Abstract no.	Title of abstract and Name(s) of the author(s)	RANK
1	AS-O3	The simultaneous role of thyroid and pituitary hormones in regulating the reproductive phases of female <i>Mystus vittatus</i> : A histometric approach - Nilanjana Chatterjee* and Baibaswata Bhattacharjee	1 st
2	AS-O1	Effects of atomic scale tailored green nanos on human pathogenic bacteria: A laboratory approach - Kuntal Bhattacharya* and Goutam Chandra	2 nd
3	AS-O5	Biodiversity, threat status and conservation priority of Ichthyofauna of river Rupnarayan at PurbaMedinipur Region, India - Mrinmay Ghorai^{1*} , Bidhan C. Patra and Utpal K. Sar	3 rd
BOTANY (BO)			
4	BO-O7	HPLC based identification of water soluble vitamins and nutraceutical value of three common grasses of West Bengal – Sudeshna Datta* , Tapan Seal , B. K. Sinha and Soumen Bhattacharjee	1 st
5	BO-O1	GC-mass based identification of flavonoids from one of the lead accessions of <i>Amaranthushypochondriacus</i> L., identified on the basis of comparative study of antioxidant capacity, reducing power, metal chelating and anti-lipid peroxidation properties - Manashi Aditya* and Soumen Bhattacharjee	2 nd
6	BO-O17	Mushroom polysaccharide: A new hope for prebiotic formulation – Payel Mitra* , Narayan Chandra Mandal and Krishnendu Acharya	3 rd
CHEMISTRY (CH)			
7	CH-O13	Generation of short pulsed X-Ray photon from water jet for application in structure determination - Ujjwal Mandal*	1 st
8	CH-O20	Theoretical investigation on the mechanistic pathways of cobalt(III) catalyzed transformation of N-substituted carbamoyl indoles to pyrroloindolone derivatives - RohiniSaha* , Saurodeep Mandal , Arpita Chatterjee , Sonjoy Mondal , Kuheli Chakrabarty and Gourab Kanti Das	2 nd
9	CH-O15	Production and spectroscopy assisted	3 rd

		characterisation of novel bio-surfactant rhamnolipids using three different strain of <i>Pseudomonas sp.</i> - Monohar Hossain Mondal* and Bidyut Saha	
EARTH SCIENCE (ES)			
10	ES-O11	The changing climate of Bengal Duars through more than 100 years trend and climatic oscillations analysis - Koyel Sam* and Namita Chakma	1 st
11	ES-O1	Study of fracture-anisotropy for delineation of groundwater recharge-zone in Precambrian metamorphics: An exemplar from Purulia District, West Bengal, India - Tapas Acharya* , Rajesh Prasad and Monalisa Mitra	2 nd
12	ES-O9	Diversity in shore platform processes: A review along the shoreline sections of Neil Island, South Andaman - Anurupa Paul* , Ashis Kr. Paul and Jatisankar Bandyopadhyay	3 rd
Environmental Sciences (EN)			
13	EN -O26	Facts and findings of fluoride: an insight into quaternary aquifer - Raju Thapa* , Srimanta Gupta , D. V. Reddy and Harjeet Kaur	1 st
14	EN -O19	Adverse influence of chronic benzene treatment on testicular structure and sperm profile in a murine model - Souryadeep Mukherjee* , Nimai Chandra Saha and Nirmal Kumar Sarkar	2 nd
15	EN -O4	Chronic exposure to biomass fuel smoke is associated with increased high blood pressure, respiratory tract obstructions, and symptoms of hypoglycemia and anaemia among rural women - Deep Chakraborty* and Naba Kumar Mondal	3 rd
Engineering Sciences (EG)			
16	EG-O1	Monitoring land use/cover change and land surface temperature - Nimish G. , Shafia Ahamad* , Chandan M. C. and Bharath H. Aithal	1 st
17	EG-O18	Downstream product polishing by nanofiltration : Transport modelling of fermentation derived acetic acid – Jayato Nayak* and Parimal Pal	2 nd
18	EG-O20	Electrodesiccation - Er. Faruk Bin Poyen* and Arkeya Pal	3 rd
Mathematics (MA)			
19	MA-O2	Mass deformed soliton solution of	1 st

		generalized KdV equation induced from position dependent effective mass quantum models - Amiya Das*	
20	MA-O9	A data encryption technique using fuzzy fibonacci sequence – Pinaki Majumdar* and Sudipto Sinha	2 nd
21	MA-O13	Positron scattering from hydrogen atom interacting with exponential cosine-screened Coulomb potentials: Positronium formation in the Rydberg states – Pramit Rej* and Arijit Ghoshal	3 rd
Medical Science (MS)			
22	MS-O1	Insight into a unique non-pathogenic variant of <i>Bacillus anthracis</i> : probable weapon against anthrax - Aparna Banerjee* and Rajib Bandopadhyay	1 st
23	MS-O9	Significance of fibronectin induced MMP-1 in progression of human prostate adenocarcinoma cells - Sekhar Pal* and Amitava Chatterjee	2 nd
24	MS-O8	Observations on the morphometry and sexual dimorphism of nasal aperture and nasal index in contemporary Indian Bengali skulls – Parthapratim Mukhopadhyay*	3 rd
PHYSICS (PH)			
25	PH-O3	Kerr based all-optical Dabit De-Multiplexer - Subhendu Biswas* and Sourangshu Mukhopadhyay	1 st
26	PH-O4	Dielectric and electrical characterization of Mn:ZnO nanostructures synthesized by mechanical alloying - Arup Dhara*, Sumanta Sain, Sachindranath Das and Swapan Kumar Pradhan	2 nd
27	PH-O8	Photon blockade effect in a cavity optomechanical system induced by a nonlinear photonic crystal - Kousik Mukherjee* and Paresh Chandra Jana	3 rd
Physiology (PG)			
28	PG-O2	Effect of music on blood pressure in girls students in urban area: A pilot study - Deepneha Das* and Abhijit Bandyopadhyay	SELECTED
Social Science and IPR (SI)			
29	SI-O25	A co-relation between Environmental and Socio-economic factors about sanitary napkin usage and related diseases among women of slums of BurdwanMunicipality –	1 st

		Senjuti Mallik* and Sumana Konar	
30	SI-O4	Traditional Knowledge Protection in India through Geographical Indications Registration – Padmavati Manchikanti and Priyanka Chakraborty*	2 nd
31	SI-O22	19 th century Bengal: Journey towards ‘Indianization’ of medical science against colonizing process of Britishers - Shravasti Pathak*	3 rd
Zoology (ZO)			
32	ZO-O8	Isolation, Identification and Characterization of Cellulolytic Bacterium <i>Bacillus flexus</i> SWO4 from Benthic Soil of Pisciculture Farm in East Kolkata Wetlands - Arijit De* , Souryadeep Mukherjee , Gobinda Chandra Sadhukhan and Nimai Chandra Saha	1 st
33	ZO-O3	Mosquito larvicidal activity of pineapple leaves against the filarial vector <i>Culex quinquefasciatus</i> – Kuntal Bhattachary* and Goutam Chandra	2 nd
34	ZO-O24	GIS mapping and breeding habitat characterization of anophelines occurring in malaria endemic areas of Hooghly District, West Bengal, India - Madhurima Seal* , Debprakash Pahari , Soumendranath Chatterjee and Nimai Chandra Saha	3 rd

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