



RESEARCH NEWS LETTER

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MAHARAJA SRIRAM CHANDRA BHANJA DEO UNIVERSITY (ERSTWHILE NORTH ORISSA UNIVERSITY)

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UNDERSTANDING THE NAAC ACCREDITATION PROCESS AND SECURING GOOD GRADES



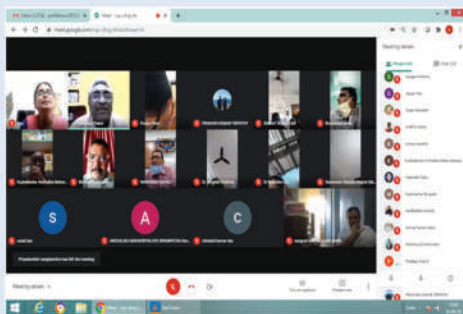
UGC Sponsored Workshop-Understanding the NAAC Accreditation Process and Securing Good Grades (Paramarsh) event held on 12-02-2021. This is a collaborative programme between Maharaja Sriram Chandra Bhanja Deo University and KIIT deemed to be University under the "Paramarsh" scheme of NAAC.

INTRACTION MEET



An interaction meeting with faculty members was organized by the University with Prof. Asoka Kumar Das, Vice Chairman, Odisha State Higher Education Council; Prof. Ranjan Bal & Prof. Jayanta Kumar Parida from Utkal University in the presence of Hon'ble Vice Chancellor, Prof. K. K. Basa along with Prof. A. K. Biswal, Chairman, PGC and the Registrar on 11.02.2021. Prof. Das stressed on the fact that quality is the benchmark in higher education institutions and high standards should be maintained both in terms of infrastructure and quality. The meeting included a formal introduction by each of the faculty and focused discussions on their research work. In a brainstorming session, he advised the faculties to find out their research priority, and stressed on identifying topics of common interests for new collaborative research projects. He also elaborated on how to get funding from different sources. Other dignitaries also interacted with the faculty members. Faculty members expressed the benefits they derived from the interaction session.

BRAINSTORMING SESSION FOR SUCCESSFUL IMPLEMENTATION OF NATIONAL EDUCATION POLICY 2020



An Online Brainstorming Session on the Desired Strategy for Successful Implementation of 'NEP 2020' in transforming Higher Education in the State of Odisha was organized by the Internal Quality Assurance Cell (IQAC) MSCB University (erstwhile North Orissa University) on the virtual platform on 16th September 2020. The meeting started with a welcome note by the Director, IQAC Prof. Hima Bindu Maringanti, and self-introduction by the Principals of Autonomous and Affiliated Colleges. The Vice Chancellor, Prof. Pradeep Kumar Chand

introduced the theme and apprised the participants about the purpose of the meet. The meet was attended by the Principals of Autonomous and Affiliated Colleges, Faculty members from both Baripada and Keonjhar Campuses, selected Research Scholars, Alumni and PG students of the University. The discussion was majorly on difference and disparity between the students completing each stage of the 4-year degree courses, challenges in implementing multi-disciplinary and multi-lingual medium of instruction, heterogeneity in the age of students at the PG level, political and resource issues, etc.

CONSTITUTION OF ETHICS COMMITTEE

MSCB University constituted six Institutional Ethics Committees viz., Institutional Animal ethics Committee, Institutional Biosafety Committee, Institutional Environmental Safety Committee, Institutional Laboratory, Safety Committee, Committee on Promotion of Academic Integrity and Prevention of Plagiarism approved by Syndicate for researchers to pursue research in the campus and uploaded on the website www.nou.nic.in.

UNIVERSITY AND INDUSTRY
RESEARCH COLLABORATION

Dr. G. Mohanty, Assistant Professor, Dept. Zoology collaborated with IMGENEX, Bhubaneswar and CIFA for a Project on "Studies on the bioactive properties of small peptides from protein hydrolysates of fish waste using biotechnological tools and suitable incorporation into bacterial/animal cell culture media for better growth" funded by DST, Govt. of Odisha, Odisha

Research Highlights

Title : **Study on Ecological implications in Similipal Biosphere Reserve using Biodiversity Indices**

Investigator : **Dr H. K. Sahu, Department of Zoology**

Funded By : **Similipal Tiger Reserve, Forest Dept. Govt. of Odisha.**

Findings : In this project the plants and the animal species of different category were enlisted and the diversity of some selected species were enumerated during study period. The species evenness and species richness were recorded in different zones of the STR.

Title : **Metagenomic analysis the high chromate tolerant bacterial isolates**

Investigator : **Prof H. N Thatoi, Department of Biotechnology**

Findings : Prof H N Thatoi have assessed the structural and functional diversity of bacterial community present in metal-contaminated soils especially chromium contaminated mine soil obtained from Sukinda Chromite mine of Odisha (India) by whole metagenomic analysis. The high chromate tolerant bacterial isolates, with Cr (VI) reducing potential were isolated in the present study, which could be considered promising biological agents for bioremediation of environments polluted with chromium.

Title : Lipid flip-flop-inducing antimicrobial phytochemicals from *Gymnema sylvestre* are bacterial membrane permeability enhancers

Investigator: Dr S.K. Sahu, Department of Biotechnology

Funded By : DST, Govt. of Odisha, Odisha

Findings : An amphiphilic phytochemical fraction (MEFGS) isolated from methanol extract of *Gymnema sylvestre* leaf powder contained six terpenoids, two flavonoids, and one alkaloid that induced rapid flip-flop of fluorescent phospholipid analog in the phosphatidyl choline bilayer. Phytochemicals in *Gymnema* extract increased bacterial membrane permeabilization as indicated by increased uptake of crystal violet. MEFGS enhanced membrane damage, resulting in a 3–5 fold increase in leakage of cytosolic ions, 0.5–2 fold increase in leakage of PO_4^- and 15–20% increase in loss of cellular proteins. MEFGS synergistically increased the efficacy of antibacterials such as curcumin, amoxillin, ampicillin, and cefotaxime on *S. aureus* plausibly by enhancing their permeability into the bacterium. For the first time, our study reveals that phytochemicals from *G. sylvestre* enhance the permeability of the bacterial plasma membrane by facilitating flip-flop of membrane lipids. Lipid flipping phytochemicals from *G. sylvestre* can be used as adjuvant therapeutics to enhance the efficacy of antibacterials by increasing their bioavailability in the target bacteria

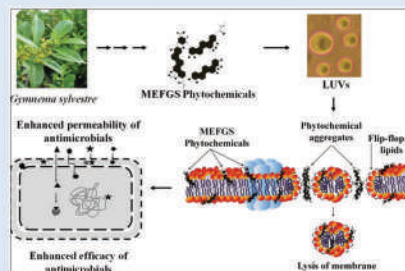


Figure 1. Methanol extracted fraction of *Gymnema sylvestre* (MEFGS) increase permeability of large unilamellar vesicles (LUVs). Our hypothesis reveal that membranotropic phytochemicals form time-dependent and concentration dependent aggregates in bacterial plasma membrane leading to their increased permeability. MEFGS phytochemicals enhance permeability of antibiotics leading their increased bioavailability in bacteria that enhance their antimicrobial efficacy (<https://doi.org/10.1021/acsomega.1c05581>)

Title : Triethanolamine-Mediated Magnetically Separable Fe_3O_4 -Pd Nanoparticles Catalyzed Heck Reaction under Ligand-Free Conditions

Investigator : Dr.Ashis Kumar Jena, Department of Chemistry

Funded By : SERB and UGC

Findings : The Fe_3O_4 -Pd nanoparticles catalyzed Heck coupling reaction in triethanolamine was performed for the first time in absence of any external ligand. The Fe_3O_4 -Pd good to excellent yields of the desired (E)-alkenes. Both acrylates and styrene derivatives were successfully coupled with electron-rich and electron-deficient aryl iodides. The scope of the reaction was also expanded to less reactive aryl bromides and aryl chlorides albeit in lower yields. A number of functional groups were well tolerated. More significantly the catalyst showed good recyclability and can be reused up to four consecutive cycles without any decrease in catalytic activity (doi.org/10.1002/slct.20102339).



Fe_3O_4 -Pd NPs catalyzed Heck coupling reactions

Title : Description of three new species of the genus *Mata* Distant, 1906 (Hemiptera: Cicadidae: Cicadinae: Oncotympanini) with notes on their natural history from Indian state of Meghalaya, India

Investigator: Dr Cuckoo Mahapatra, Department of Zoology

Investigator: Collaborative work with Zoological Survey of India, Kolkata

Funded by: The work describes three new species of cicadas of genus *Mata*. viz. *Matalenonia* sp. nov.; *Mataruffordii* sp. nov. and *Matameghalayan* sp. nov. from Indian state of Meghalaya. The study identified the keys and taxonomic descriptions of these species along with detailed accounts of their natural history and acoustics (<https://www.biotaxa.org/Zootaxa/article/view/zootaxa.4908.1.1>).



Mata ruffordii



Mata meghalayana



Mata lenonia

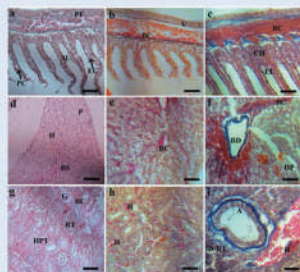
RESEARCH NEWS LETTER

Title : Physiological assessment of fish health in mineral-rich areas of Ganjam, Odisha, India, and chronic toxicity of zirconium oxychloride on the fishes of Channapunctata

Investigator: Dr Cuckoo Mahapatra, Assistant Professor, Department of Zoology

Funded by: UGC-BSR Start-up Grant and DST-SERB, Govt of India

Findings : The work assessed the health of food fish Channapunctata from the mineral-rich areas of Ganjam, Odisha, India, mined for heavy and transition metal ores like ilmenite, zircon, monazite. The fishes collected from these areas showed histopathological anomalies in vital organs like the liver, kidney, gills, stomach and intestine while cytological analysis revealed vacuolated cytoplasm and micronuclei. The work emphasizes that high concentration of metal toxicants in aquatic ecosystems has a detrimental impact on fish health that ultimately jeopardizes human health (<https://doi.org/10.1007/s10661-021-09451-x>).



Title : Optical, magnetic and biomedical characteristics of La and Gd doped ZnO nanostructures

Investigator : Dr P Mallick, Department of Physics

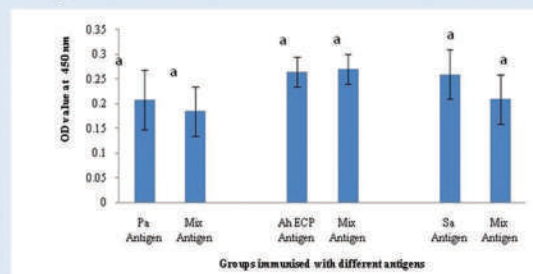
Findings : Dr. Pravanjan Mallick and his team of Department of Physics, MSCB University in collaboration with KU Leuven, Belgium, NISER, Bhubaneswar, Fakir Mohan University, Balasore and Utkal University, Bhubaneswar for different aspects have studied the optical, magnetic and biomedical characteristics of La and Gd doped ZnO nanostructures. Their study indicated the synthesized ZnO nanorods could be beneficial for optical device applications in the UV range, spintronic devices, as well as for biomedical purposes.

DOI : <https://doi.org/10.1016/j.jallcom.2021.158937>; <https://doi.org/10.1016/j.mtcomm.2021.102725>

Title : Development of multivalent vaccine for fish

Investigator : Dr S. K Nayak, Department of Biotechnology

Findings : A multivalent vaccine using antigens of *Pseudomonas aeruginosa*, *Staphylococcus aureus* and the extracellular protein (ECP) antigen of *Aeromonas hydrophila* was developed. The prepared vaccine was intraperitoneally injected to Labeorohita fish with individual antigens and mixed antigen followed by a booster dose. The findings of the study showed that multiple antigens evoked immune responses at par with their individual antigenic forms and the antibody level as determined by indirect ELISA in the serum samples obtained from Labeorohita fingerlings immunized with different antigens after 14 days post-immunization is shown in Figure. Therefore, the effective multivalent vaccination strategy can be developed against these pathogens to prevent severe economic losses in aquaculture (<https://doi.org/10.1111/are.15189>).



Title : Semiotics-based Multi-modal Human Emotion Recognition System

Investigator : Dr. Hima Bindu Maringanti, Professor, Dept. of Computer Application

Funded By : Science and Technology Department, Govt. of Odisha

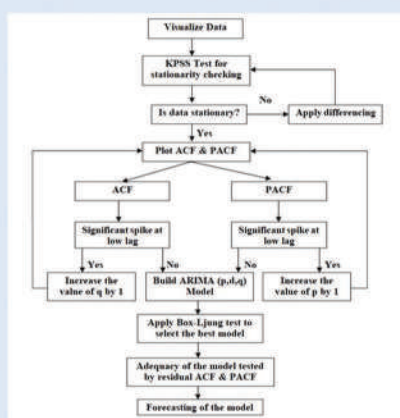
Findings : In a Semiotics based Multi-modal Human Emotion Recognition System modalities like text, face, voice, GSR, HR, fMRI were individually studied, experimented and finally a fusion model developed. Some very unique findings were inferred with respect to emotions and their manifestation in the functional areas of the brain. Hardly any difference was observed between 'sad' and 'joy' emotions, validating weeping when very happy.

Title : BIFM : Big-Data Driven Intelligent Forecasting Model for COVID-19

Investigator : Dr. Sujata Dash, Department of Computer Application

Funded by : This work was supported in part by the Operational Program Integrated Infrastructure for the Project (Identification and possibilities of implementation of new technological measures in transport to achieve safe mobility during a pandemic caused by COVID-19) through the ITMS Code under Grant 313011AUX5, and in part by the European Regional Development Fund.

Findings : This work focuses on developing an intelligent computing model for forecasting the outbreak of COVID-19. The autoregressive integrated moving average (ARIMA) machine learning model is used to develop the best model for twenty-one worst-affected states of India and six worst-hit countries of the world including India. The best ARIMA models are used for predicting the daily-confirmed cases for 90 days future values of six worst-hit countries of the world and six high incidence states of India. The goodness-of-fit measures for the model achieved 85% MAPE for all the countries and all states of India. The above computational analysis will be able to throw some light on the planning and management of healthcare systems and infrastructure.



Workflow Diagram of ARIMA Model

Title : Tree species composition and carbon stocks assessment in different forest types of Similipal Biosphere Reserve, Odisha

Investigator : Dr S. C. Sahu, Department of Botany

Findings : Structure, diversity, composition, soil features and carbon stocks in six distinct plant functional types, namely: Moist Mixed-Deciduous Forest, Peninsular Sal Forest, Semi-Evergreen Forest, Planted Teak Forest, Bamboo Brakes and Degraded Thorny Shrubby Forest were quantified as secondary tropical deciduous forests of the Chandaka Wildlife Sanctuary, Eastern Ghats of Odisha, India. Seventy-one species ≥ 10 cm Girth at breast height were recorded, belonging to 38 families and 65 genera. Above- ground biomass carbon and soil organic carbon ranged from 2.1–72.7 Mg C ha⁻¹ and 20.6–67.1 Mg C ha⁻¹, respectively, among all plant functional types. Soil organic carbon and important value index were positively correlated with above- ground biomass carbon. Maximum carbon allocation was in SOC pool (51–91%), followed by the above- ground biomass pool (9–52%), indicating SOC is one of the major carbon sinks in secondary dry forests (<https://doi.org/10.1007/s11676-020-01119-5>).

Title : Causal Link between Food Inflation and Supply Chain Management Practices in India

Investigator : Dr. Pratap Kumar Jena, Assistant Professor, Dept. of Economics

Funded by : Institute of Eminence, UGC New Delhi

Findings : This is a collaborative project with University of Hyderabad and the project is funded by the Institute of Eminence, UGC New Delhi for the period of three years to examine the link between logistics costs and food inflation in India. The outcome of the study is twofold: In the short-run, we are expecting to identify different aspects supply chain management practices which cause inflation rate to raise. However, in the long-run, we might come up with policy recommendations which will help both policy makers and academicians.

Title : Semiotics-based Multi-modal Human Emotion Recognition System

Investigator : Dr. Hima Bindu Maringanti, Professor, Dept. of Computer Application

Funded by : Institute of Eminence, UGC New Delhi

Findings : In a Semiotics based Multi-modal Human Emotion Recognition System modalities like text, face, voice, GSR, HR, fMRI were individually studied, experimented and finally a fusion model developed. Some very unique findings were inferred with respect to emotions and their manifestation in the functional areas of the brain. Hardly any difference was observed between 'sad' and 'joy' emotions, validating weeping when very happy.

RESEARCH NEWS LETTER

Title : **Development of Low-cost Fish liquid organic fertilizer**

Investigator : **Dr Gargee Mohanty, Department of Zoology**

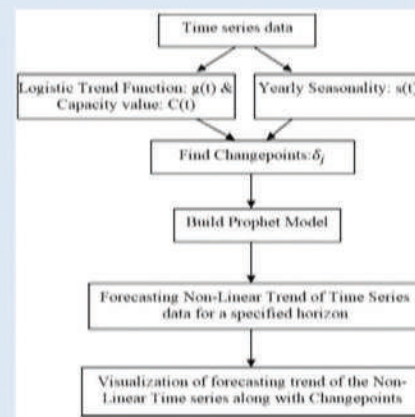
Funded By : **Science and Technology Department, Govt. of Odisha**

Findings : Low-cost fish liquid organic fertilizer was developed from fresh water fish visceral waste. The Process involves mincing, mixture of fish waste and sugarcane molasses, Formation of three layers after exposure to sunlight for 21 days to 40 days, organic manure indicated the successful formation of fish liquid fertilizer fig (1). To validate the efficacy of the formulated Fish liquid organic fertilizer we have applied it in two different concentrations on Zea mays, mung bean and the physical parameters of plants planted with different types of chemical fertilizers, vermicompost along with control (without any fertilizer) were compared. The physicochemical parameters of the liquid fish fertilizer were also evaluated. It shows good result in growth and yield of plant. The calcium and organic carbon content of the fertilizer was found to be substantially good. The evaluation was made using ICP-OES, Perkin Elmer, Avio 200

Title : **Intelligent Computing on Time-Series Data Analysis and Prediction of Covid-19 Pandemics**

Investigator : **Dr. Sujata Dash, Department of Computer Application**

Findings : The Facebook Prophet model predicts 90 days future values including the peak date of the confirmed cases of COVID-19 for six worst hit countries of the world including India and six high incidence states of India. The model also identifies five significant changepoints in the growth curve of confirmed cases of India which indicate the impact of the interventions imposed by Government of India on the growth rate of the infection. The goodness-of-fit of the model measures 85% MAPE for all six countries and all six states of India. The above computational analysis may be able to throw some light on planning and management of healthcare system and infrastructure.



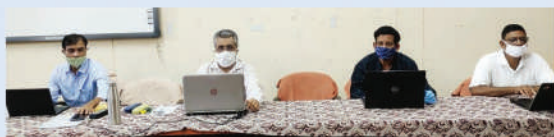
Workflow Diagram of Prophet Model

Events

EXPLORING OPPORTUNITIES OF THE COLLABORATIVE PROGRAMME THROUGH BOARD OF RESEARCH IN NUCLEAR SCIENCE (BRNS)

An online meeting through video conferencing was organized by Bhabha Atomic Research (BARC), Mumbai to explore opportunities of the collaborative programme through BRNS (Board of Research in Nuclear Science) on identified areas of scientific research on April 18, 2021. Dr. Ajit Kumar Mohanty, Director, BARC gave the opening remark on the occasion and Hon'ble Vice Chancellor, Prof. K. K. Basa introduced them to Maharaja Sriram Chandra Bhanja Deo University. A detailed funding, types of research projects supported and various Research Projects Awards given by BRNS was presented by Mr. S. K. Sapra, Scientific Secretary, BRNS. He elaborated on funding in the area of Laser in Bio-Medical Applications, food preservation/processing, New materials, Machine learning and Mineral exploration. Research & Development activities in the area of Chemical Sciences undertaken by the Department of Atomic Energy were discussed by Dr. A. K. Tyagi, Associate Director, Chemistry group of BARC. He highlighted recent works carried out by BARC in nuclear fuel cycle, hydrogen generation and novel extractants for back-end fuel technology fuel technology. He also gave a representative list of available characterization techniques at BARC and various research projects funded by BARC across the country. Research & Development activities in the area of the Bio-Science Group of BARC were presented by Dr. Sunil Ghosh, former Associate Director, Bio Science Group, BARC. Late Dr. Srikumar Banerjee, former Chairman, Atomic Energy Commission also graced the occasion. The concluding remarks were given by Mr. S. K. Sapra, Scientific Secretary, BRNS.

NATIONAL WEBINAR ON BIODIVERSITY CONSERVATION: CHALLENGES AHEAD



A National Webinar entitled "Biodiversity Conservation: Challenges ahead" was organised by the Department of Botany, MSCB University, on 28th Sept. 2020 on the occasion of the superannuation of Prof. Umaballava Mohapatra, Professor. Hon'ble Vice-Chancellor, Prof. Pradeep Kumar Chand inaugurated the webinar. He highlighted the importance of biodiversity and stressed the need for its conservation in the coming days to protect a healthy environment. On the occasion, Prof. Anil Kumar Biswal, Chairman, Post Graduate Council and Head of the Department, chaired the webinar and spoke on the challenges of biodiversity conservation. The chief speaker, Prof. S. R. Yadav focused on the role of academic institutions in biodiversity conservation. Similarly, Prof. U. B. Mohapatra highlighted the performance of Biotechnology for Biodiversity conservation. Prof. S. K. Palita from Central University of Koraput pointed out the impact of climate change on biodiversity. Dr. N. K. Dhal, Chief scientist, IMMT enthralled upon biodiversity of eastern ghats. The webinar was attended by Faculties, Scientists, researchers and students from different Universities and colleges throughout the country. The organizing secretary, Dr. S. C. Sahu introduced the guests at the beginning and proposed a formal vote of thanks at the end of the webinar.

INTERNATIONAL WEBINAR ON BIOTECHNOLOGICAL INNOVATIONS IN 21ST CENTURY



A Two days International webinar on "Biotechnological Innovations in 21st century" sponsored by the world bank was organized by the Department of Biotechnology on 19th -20th March 2021. The webinar was inaugurated by Hon'ble Vice Chancellor Prof. K. K. Basa. Prof. Basa underlined the vital role of Biotechnology in solving the issues in the domain of food, health, and climate change. The Chief Guest of the webinar Prof. S. P. Adhikary, Former Vice Chancellor, F. M. University delivered a talk on Biotechnology for Odisha and the role of Universities to empower the youth of the state. In this international webinar Prof. T. Nakanishi of Nihon University, Japan; Dr. G. Senthil Arumugam, IIT, Madras; Dr. P. S. Sahu, Medical University of America, Nevis, USA; Dr. P. Pattnaik, Director, Merck Life Science, Singapore; Dr. S. Hota, University of California, USA; Prof. N. Thajuddin, Bharathidasan University; Prof. K. C. Mondal, Vidyasagar University and few more resource persons across the country and abroad delivered talks and put their views highlighting on the current research activities and future prospects in the field of biotechnology.

INTERNATIONAL WEBINAR ON SANSKRIT AND NATION BUILDING

The Department of Sanskrit, MSCB University (erstwhile North Orissa University), Keonjhar Campus organized a national webinar on the topic 'Sanskrit and Nation Building' on 21 November 2020. The event was aimed to discuss a crucial topic, which elaborates on the role of literature in envisioning and shaping a nation. Several renowned scholars and professors spoke on the occasion. The eminent guests included professor Prafulla Kumar Mishra (Hon'ble chancellor Dr Rajendra Prasad Central University, Bihar), Harekrushna Satpathy, Vice Chancellor (KISS DEEMED University), professor Aruna Ranjan Mishra (department of Sanskrit, Pali and Prakrit, Visvabharati University) and Professor Muralidhar Panda (President, International Sanskrit Academy, South Africa). Professor Somanath Sahu (CSU, Vedavyas campus, Himachal Pradesh) and Dr Manoranjan Senapaty (Department of Sanskrit, Utkal University) were the resource persons. The webinar was conducted in collaboration with Villa Marie Degree College for Women, Hyderabad. Dr Hiralal Dash, associate professor and head, department of Sanskrit, MSCB University (erstwhile North Orissa University) was the convenor of the event, and Dr Gitanjali Nayak, lecturer in Sanskrit, Villa Marie College was the co-convenor.

WEBINARS CONDUCTED BY DEPT. OF ODIA,
KEONJHAR CAMPUS

- A National Webinar on the theme "Travelogues in Odia: Past and Present" was organized on 24 August 2020. The event was graced by prominent scholars of Odia literature like Professor Ashok Das of Sambalpur University and Professor Manoranjan Pradhan of Viswabharati University, Shantiniketan.
- The department organized another national webinar on 21 December 2020 titled Odia Katha Sahityare Prakrutika Biparjyara Chitra (Natural Disaster and the Odia Fiction). The well-known scholar professor Baishnab Charan Samal (retired professor Odia, Viswabharati University), professor Prasanna Kumar Swain (professor, Berhampur University), and Alok Baral (assistant professor of Odia, Central University of Odisha, Koraput) shared their invaluable insights on the theme of the webinar.
- The third national webinar focussed on exploring new areas and methodologies in research and was therefore devoted to field studies. The speakers on the occasion were Professor Krushna Chandra Pradhan, Visiting Professor, Central University of Odisha, Koraput, and Dr. Krushna Chandra Nayak, Retired reader in Odia, and former Principal, D.D. autonomous college.

EVENTS CONDUCTED BY DEPT. OF ENGLISH,
KEONJHAR CAMPUS

- The department of English, MSCB U (Erstwhile North Orissa University), Keonjhar Campus organized one national webinar series titled "Perspectives on History of English Literature", which was graced by eminent scholars of literature from various parts of India.
- The department also hosted an international webinar series on Gandhi on the theme "Gandhi's Legacy: Reflections and Reappraisals" between 22 September to 29 October 2020. Some of the world-renowned Gandhi scholars such as Professor Parama Roy and Professor Vinay Lal were among the speakers.
- A special lecture on postcolonial literature was delivered by Prof. Madahusmita Pati, RD women's university in February 2021.
- Also, a special online lecture titled "a tale of two trees, or how India took to the book" was delivered by Prof. Abhijit Gupta from Jadavpur University on 19 March 2021. As an attempt to help students explore career options a talk along the theme of 'career in journalism' had been conducted. Movies related to the curriculum were also screened.

SIGNING OF MOU WITH ZOOLOGICAL SURVEY OF INDIA

The Zoological Survey of India (ZSI) and Maharaja Sriram Chandra Bhanja Deo University, Baripada, Odisha (MSCB University) have entered into a 'Memorandum of Understanding' for scientific and educational cooperation on 20.04.2021. The Zoological Survey of India was represented by the Director, ZSI and the MSCB University, Baripada was represented by the Vice Chancellor Prof. K.K. Basa. This MOU underscores the commitment of both institutions towards nurturing scientific excellence. The scope of the agreement includes sharing of relevant information and laboratory resources as well as the exchange of students, scholars, and postdoctoral fellows for projects. The MoU aims to establish provisions for joint publications, joint projects, conferences and workshops, exchange visits of faculty members, and joint research activities. Under this MoU, the ZSI, Kolkata or any of its 16 Regional Centres shall be a recognized research centre for undertaking Doctoral and Post-Doctoral Programme by the MSCB University, Baripada. The scientists of the ZSI conducting research shall be recognized as Guide/Co-Guide for supervising Master's and Doctoral Programmes in Zoology, Life Sciences, Wildlife Sciences and or any other Biological Sciences.

3RD FOUNDATION DAY OF LITERARY COUNCIL



The 3rd foundation day of "Odia Sahitya Parisad" of MSCB University was observed on 20.12.2020. Hon'ble Vice Chancellor, Prof. K. K. Basa, the Chief Guest of the occasion felicitated Dr. Kabita Barik, retired Associate Professor of Odia, MPC (A) College for her contribution to Odia literature. A book titled "Mayurbhanj Ra Loka Gita O LokaNrutya": Eka Adhyayan" written by Dr. Mohan Lal Sahu, retired Principal of Baripada College, Baripada was also

formally released. The chief speaker of the occasion, Dr. Ramakanta Singh, Ex-Principal, Betnoti College, Betnoti, complimented Vice Chancellor for organizing this programme & stressed that we should always promote our mother tongue language as it helps us to stay connected with our culture and values. Among others who graced the occasion on behalf of the Parisad were Prof. P. K. Satapathy, the President; Dr. (Mrs.) P. Parida, the Vice president, and Dr. Bichitrnath Sahoo, the Secretary. It was realized that for the promotion of Odia language and literature, activities like supporting research works, organizing seminars, publication of journals and books, translation of Odia literary works into other languages, and documentation of folk tales in Odia be encouraged. The program was attended by the faculty members and non-teaching staff of the University. A vote of thanks was offered by Mrs. Ranjita Patra from the Department of Odia.

Book release



- Indigenous Tribes and Biodiversity Conservation. Edited by H. N. Thatoi and Madhusmita Sahoo. Published by SSDN Publishers & Distributors New Delhi- 110002. ISBN No. 978-93-889035-0
- Biodiversity Conservation and Livelihood Management . Edited by Hrudayanath Thatoi and Priya Ranjan Debata
Daya Publishing House@ A Division of Astral International Pvt. Ltd. New Delhi – 110 002, ISBN 978-81-7035

Lecture Series Organized

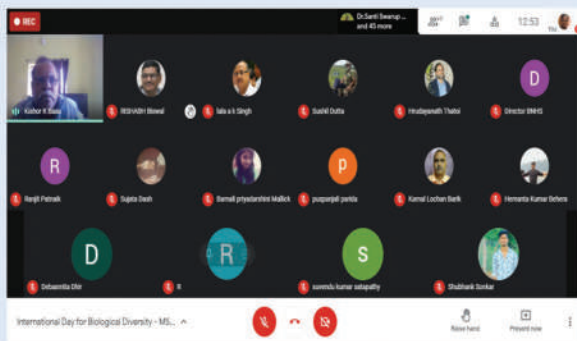


An International Online Lecture Series on "Recent trends in Artificial Intelligence and Machine Learning " organized by the Department of Computer Application was inaugurated by Hon'ble Vice Chancellor Prof. Pradeep Kumar Chand on 16-July-2020. The week-long symposium, which was held online via Google Meet featured 13 distinguished speakers from home and abroad. In his inaugural address, Prof. Chand remembered Alan Turing, the father of machine learning, and expressed that technologies like machine learning, deep learning have touched all spheres of our lives and will change the world in a revolutionary manner in the coming days.

The event was chaired by Prof. Anil Kumar Biswal, Chairman of the PG Council, who opined that at the time of the Covid-19, humans might have been temporarily helpless, but they were trying their best to solve their problems through machine learning. The convenor of the program, Head of the Department Dr. Sujata Dash introduced the guests and delivered the welcome address. Dr. Gajendra Pal Singh Raghava, Professor of Computational Biology, Indraprastha Institute of Information Technology, New Delhi delivered the inaugural lecture on "Big Data Mining and Machine Learning in Bioinformatics".

Celebrations/Observation

INTERNATIONAL BIODIVERSITY DAY



International Biodiversity Day was celebrated on 22nd May 2021 at MSCB University. On the occasion, a webinar was organized on the theme for this year i.e 'We're part of the solution' as declared by United Nations where faculty, research scholars and students of various post graduate departments of the University participated. Hon'ble Vice Chancellor Prof. K. K. Basa highlighted the purpose and uniqueness of the day and emphasized the need to promulgate the study of taxonomy in the field of biodiversity conservation. The webinar was attended by renowned zoologist Prof. S. K. Dutta as the keynote speaker and during his talk on the topic "Solving for Nature and Solution from Nature". Prof. Dutta emphasized the role and responsibilities of the scientific community for the conservation of biodiversity and also advised to pay attention for improving skill for conservation, documentation, and monitoring of biodiversity. On this occasion, the chief guest of the function Dr. Bivash Pandav, Director, Bombay Natural History Society, addressed the participants on "Conservation of Biodiversity in India - Problems and Challenges" wherein he figured out distinctively on biogeographical zones, major risks of biodiversity disasters, and substantial ecological disintegration. While, Prof. H.N.Thatoi, Director, Centre for Similipal Studies gave the welcome address and introduced the guests, the formal vote of thanks was extended by Prof. H. K.Sahu, Department of Zoology

WORLD ENVIRONMENT DAY



A webinar was organized to celebrate/observe the World Environment Day on 5th June 2021 at MSCB University. This occasion, was chaired by Prof. K. K. Basa, Hon'ble Vice Chancellor of the University. On the inaugural address of the webinar, he stressed upon the goal and distinctiveness of the day and expressed concern for coordination between 'Ecology' and 'Economics' for protecting the environment in the present time. He also signifies the application of the traditional knowledge of indigenous peoples to the preservation of the environment by protecting a wide range of plants. He also mentioned that University in this direction has taken a right step by setting a park for the conservation of Orchids and other varieties of plants obtained from Similipal Biosphere Reserve. Prof. A. B. Das, former Professor, Department of Botany, Utkal University, delivered a talk as the keynote speaker on the topic "Resilience of coastal biodiversity towards climate change". Prof. Das highlighted on biodiversity conservation and suggested for restoration of saline forest communities for the ecological protection of the Odisha coast.

Patents/MoU/Awards/Publications/Ph. D

Ph.D	: 41
Publications	
● Research articles (UGC care enlisted)	: 89
● Book/Book Chapters	: 68
● Patent	: 3
MoU	: 2
Awards (Research)	: 26

Seminar/ Workshop/Conferences Organized

Department	Level National/International/State	Category	Title
Odia	National	Webinar	Odia Katha Sahitya Re prakrutika biparjaya Chitra
English	University	Online Lecture	The curious wanderer: Jalandhar dev and his tour to Srilanka
Sanskrit	National	Webinar	Sanskrit and nation building in collaboration with Villa Marie degree college for women, Hyderabad
Botany	National	Webinar	Biodiversity conservation: challenges ahead
English	International	Webinar	Gandhi's legacy: reflections & reappraisals
IQAC	University	Brainstorming Session	National education policy (NEP)-2020
Odia	National	Webinar	Travelogues in Odia: past and present
English	National	Occasional Webinar	To ban or not to ban: how were texts censored in colonial India
English	National	Online Lecture Series	Approaching cultural studies
English	National	Occasional Webinar	Journalism: reporting stories, drafting history
English	National	Occasional Webinar	Literature and the uses of history
Computer Application	International	Online Lecture Series	Recent trends in artificial intelligence and machine learning
English	National	Webinar	Translation and Knowledge making: Impact of translation on literary polysystems and cultural ecology
English	National	Online Lecture Series	Perspectives on history of English literature
IQAC	University	Training	SWAYAM
Odia	State	Seminar	Observation of Odia Sastriya Bhasamanyata day 7th year
IQAC	State	Workshop	Mind matters workshop
Odia	State	Annual Meeting	Sahitya Parishad & Basant Satapathy Sahitya Sangathan
Physics	National	Seminar	Unity in Particle Physics & Beyond: Einstein's Dream, Unification of Forces And The Evolution Of The Universe
Odia	State	Seminar	1980 Parabarti Odia Kabita; Angika O Atmikadiganta
Botany & Biotechnology	State	Conference	Green technology for environment management

Research Grants Received

PI: Dr. H.K. Sahu, Zoology

Title: Integrated microwater shed management plan in Similipal tiger reserve using remote sensing and GIS

Funding Agency: Odisha Forest Dept

Amount: 8.33 Lakhs

PI: Dr. H.K. Sahu, Zoology

Title: Study on Ecological Implications in Similipal Biosphere Reserve(SBR) using Biodiversity indices

Funding Agency: Odisha Forest Dept

Amount: 11.21 Lakhs

PI: Dr. G. Mohanty, Zoology

Title: Studies on the bioactive properties of small peptides from protein hydrolysates of fish waste using biotechnological tools and suitable incorporation into bacterial/animal cell culture media for better growth

Funding Agency: DST, Odisha

Amount: 5.93 Lakhs

PI: Dr. Pravanjan Mallick, Physics

Title: Tailoring the Magnetic Proximity Effect in Ferromagnetic Phase Embedded in NiO Matrix for Antiferromagnetic Spintronics Application

Funding Agency: DST, Govt. of Odisha

Amount: 2.59 Lakhs

PI: Dr. Pravanjan Mallick, Physics

Title: Swift Heavy Ion Irradiation Induced Emergence of Properties of ZnO Nanoparticles Embedded in PVA Matrix for Flexible Devices

Funding Agency: IUAC, New Delhi

Amount: 0.81 Lakhs

PI: Dr. Sisira Behera, Odia

Title: Odia Swabhimananaralitihasa: Uttara Odishara Utkrasta Lokakala Jhumor: Eka SanskrutikaAnushilan

Funding Agency: OURIIP seed fund

Amount: 2.86 Lakhs