

Inaugural Schedule

Day 1: December 22, 2022 (Thursday)

9:30 am	Lighting of lamp
9:35 am	Welcome address by Prof. Kunal Pal , Chairman and HoD, BM, NIT Rourkela
9:40 am	Report by Convener Dr. A. Ravi Kant , Asst. Professor, BM, NIT Rourkela
9:45 am	Report by Co-Convener Prof. Singam Jayanthu , Professor, MN, NIT Rourkela
9:50 am	Address by Prof. K. Umamaheshwar Rao , Director, NIT Rourkela
10:00 am	Release of Souvenir of NBC-2022
10:15 am	Address by " <i>Guest of Honor</i> " Dr. Srikant Kumar Sahu Director, L.V. Prasad Eye Hospital, Bhubaneswar
10:25 am	Address by " <i>Chief Guest</i> " Shri PM Prasad Chairman-cum-Managing Director, Central Coalfields Limited, Ranchi
10:40 am	Vote of thanks by Prof. Bala Chakravarthy N. , Asst. Professor, BM, NIT Rourkela
10:45 am	High Tea

Programme Schedule

Day 1: December 22, 2022 (Thursday)

8:00 – 9:30 am	Registration of Participants
9:30 – 10:45 am	Inauguration
10:45 – 11:00 am	High Tea

Session 1:

Chair: Dr. Singam Jayanthu, MN, NIT Rourkela

Co-Chair: Dr. Angana Sarkar, BM, NIT Rourkela

11:00 – 11:30 am	Keynote speech 1: Shri PM Prasad <i>Environmental issues and their mitigation in coal mining</i>
11:30 – 12:00 noon	Keynote speech 2: Dr. Srikant Kumar Sahu <i>“Necessity is the mother of invention”, An Eye Surgeon’s Perspective</i>
12:00 – 12:30 pm	Keynote speech 3: Prof. B Ravi <i>Indigenous Development of Affordable Medical Devices: Challenges and Best Practices</i>
12:30 – 1:30 pm	Paper presentation
	Jyotirmaya Satpathy <i>Ophthalmologic soundings in neuro – feedback</i> Sonalisa Pandey, Debashis Sahoo <i>Prototyping Hardware Device for Rapid Gene Expression Measurement</i> Kumari Chandrika, Ashish Sachan <i>Screening and optimized production of bacteriocinlike inhibitory substances</i> K. Sridhar Reddy, Singam Jayanthu, Mukteswar Pradhan, Pritiranjana S, Anil Kumar Indla <i>Need for bio engineering innovations for environmental sustainability in mining industry</i> Ava Apat, Singam Jayanthu, V K Shukla, Deepak Prabhakar, Elamurugan A, Subham Sahoo <i>Effects and control measures of water pollution in opencast coal mine - a case study</i>

	Surendra Kumar Dogra , Arun Kumar Sahoo, Jitendra Pramanik, Abhaya Kumar Samal, Singam Jayanthu <i>A Greener Approach for Metal Recovery from Ores and Waste with Microorganisms</i>
1:30 – 2:30 pm	Lunch break

Session 2:

Chair: Dr. Srikant Kumar Sahu, LVPEI Hospital, Bhubaneswar

Co-Chair: Dr. Falguni S, MN, NIT Rourkela

2:30 – 3:15 pm	Keynote speech 4: Prof. Alok Jain <i>Combining intriguing Computational Approaches to Design, Optimize and Predict the Bioactivity of highly selective and potent PKM2 Modulators</i>
3:15 – 3:45 pm	Keynote speech 5: Shri B Veera Reddy <i>Health and Safety in Coal Mines</i>
3:45 – 4:15 pm	Keynote speech 6: Shri Kalasani Mohan Reddy <i>Carbon Footprint - Sequestration of CO₂ to overcome Climate Change</i>
4:15 – 4:30 pm	High Tea
4:30 – 6:00 pm	Paper presentation
	<p>Madhu Varsha SA , Nivedha V, Mohana Priya S, Shriram Bhutt B, Vijay Chithra G and Thirugnanam A <i>Analyzing the phytochemical potential of Ocimum basilicum for wound healing applications</i></p> <p>Vijaya Giramkar, Girish Phatak, Sushama Sabharwal <i>Green Synthesis of Silver Nanoparticles for Nanobased Bioassay for Alkaline Phosphatase</i></p> <p>Sweta Pradhana, Mithun Biswas <i>Protein-Protein Association Reaction Study on GB1 Protein Dimerization</i></p> <p>Deepak Mishra, Rakhee Das, Singam Jayanthu <i>Environmental pollution due to mine wastes leachate– an appraisal</i></p> <p>Smriti Sinha, Akashlina Basu, Soumen Das <i>A low-cost, pH-sensitive colorimetric paper-based device for the detection of urea</i></p> <p>Veda Prakash, Lipika Parida <i>Vitamin-E encapsulated nanoemulsions: Formulation, Rheological</i></p>

	<p><i>and Antimicrobial analysis</i></p> <p>E. S. Harsha Haridas , M. K. Ravi Varma, Goutam Kumar Chandra, Susmita Bhattacharya</p> <p><i>Bioinspired phytofabrication of Ag nanoparticles using Carica papaya flower extract; Application as potential antibacterial agent</i></p> <p>Himanshi Diwan, Tanu, Mahesh Kumar Sah</p> <p><i>Development and characterization of Silica-Keratin Microbeads for drug delivery and tissue engineering applications</i></p> <p>S. Geeta Priya</p> <p><i>Medical device development post covid era</i></p>
6:00 – 7:30 pm	<p>Poster presentation</p> <p>Subhash Venkata Sai Varshapally, Borra Om Prakash, Yanamadala Ashwin Vijay Kumar, Anaparthi Shanmukha Priya, Sai Sri Aasritha Pedomallu, Tarun Agarwal</p> <p><i>Decellularized plant scaffolds for wound healing applications</i></p> <p>Gadamsetty Jeevana Lakshmi Kumar, Ganta Ramcharan, Manas Tripurana, Tarun Agarwal, Kanishk Singh</p> <p><i>Calcium alginate bead-based scaffolds for wound healing applications</i></p> <p>Anushka Ash, Madhulika Chakravarty, Aditya Sunkaria, Alok Jain</p> <p><i>Don't Forget About Alzheimer's: Can Neuropeptides be the New Therapeutic Approach?</i></p> <p>Mani Prabha Panda, Eshika Jaiswal, Christoph Globisch, Alok Jain</p> <p><i>Integrating design and optimization of potent symmetric anticancer molecules targeting PKM2 with insights on Post Translational Modifications governing its structural dynamics</i></p> <p>Akashlina Basu, Soumen Das</p> <p><i>Development of a frugal analytical method for selective colorimetric detection of lead: A proof of concept</i></p> <p>Swati Singh</p> <p><i>A review on application of Quantum Game Theoretic analysis to real-world problems</i></p> <p>Saksham Handa, Sunny Mukherjee and Mahesh Kumar Sah</p> <p><i>Optimization of extraction process of keratin from human hair</i></p> <p>Amrita Mohanty, Aparna Chaudhari, A. Pavan Kumar, Gireesh Babu P., Dhalongsaih Reang</p> <p><i>Development Of Molecular Markers to Identify Clarias Magur X Clarias Gariepinus Hybrids</i></p>

	<p>Silvash Prasad Mishra, Ravi Kant <i>Human microRNA modulates its gut microbiota</i></p> <p>Sanchari Chakraborty, Mithun Biswas <i>Effect of multivalent interactions on protein phase separation</i></p> <p>Rajendra Rath, Mithun Biswas <i>Free Energy calculation of Protein-Protein association from ReaDDY simulation</i></p> <p>Janmejaya Bag, Monalisa Mishra <i>Aluminum oxide nanoparticle-induced free radicals and caused oxidative stress in Drosophila melanogaster</i></p> <p>Deepak Kumar Panda, Monalisa Mishra <i>Structural modification of Ghost Grasshopper (Aularches miliaris) wing and its bactericidal activity</i></p> <p>Kalpanarani Dash, Monalisa Mishra <i>A toxicity assessment of dietary salt Sodium Chloride (NaCl) by using Drosophila melanogaster as a model organism</i></p>
8:00 – 9:00 pm	Dinner

Day 2: December 23, 2022 (Friday)

Session 3:

Chair: Dr. Sivakumar Misra, BPUT, Odisha

Co-Chair: Dr. Earu Banoth, BM, NIT Rourkela

9:00 – 9:45 am	<p>Keynote speech 7: Ir. Dr. Mohamed Sultan Mohamed Ali <i>Implantable Pressure Sensor and Smart Stent for Coronary Artery Disease</i></p>
9:45 – 10:45 am	Paper presentation
	<p>Sanjay Purohit, Singam Jayanthu, K S Rao, Thomas, Sameer M <i>Health effects of blasting operations in underground and surface excavations</i></p> <p>Nivedita Singh, Prof R H Talwekar <i>Comparison of AlexNet and GoogLeNet CNN models to detect Obstructive Sleep Apnea using single-channel Electrocardiogram</i></p> <p>Utkarsh Jain, Dipanjan Chakraborty, Sankar Ganesh Palani <i>Application of machine learning for the predictoin of biogas yeidl from anaeroboic digesters</i></p> <p>Manisha Das, Falguni Sarkar, H.B. Sahoo <i>Development of IOT Based Hybrid Type Water Treatment</i></p>

	<p><i>Methodology to Reduce the Hexavalent Chromium Concentration in Discharged Mine Water</i></p> <p>Manabendra Nath</p> <p><i>The mine water analysis of coal bearing strata of sutunga coalfield of east jaintia hills of meghalaya, northeast India</i></p> <p>Rajeev Kumar Sahoo, Surya Kant Tripathi, Bijesh Kumar Biswal</p> <p><i>Piperlongumine, its pharmacological relevance and anticancer potential</i></p>
10:45 – 11:00 am	High Tea
11:00 – 11:45 am	<p>Keynote speech 8: Prof. Singam Jayanthu</p> <p><i>Smart technologies for fatigue monitoring through artificial intelligence vis-à-vis improvement of safety in mining industry</i></p>
12:00 – 1:15 pm	Bio-Idea Pitch
1:15 – 2:30 pm	Lunch break

Session 4:

Chair: Dr. A. Thirugnanam, BM, NIT Rourkela

Co-Chair: Miss. Ava Apath, CCL

2:30 – 3:15 pm	<p>Keynote speech 9: Dr. Manisha Agarwal</p> <p><i>MRI and Ultrasound in diagnostics, recent advances and inconveniences faced by medical officer</i></p>
3:15 – 4:00 pm	Scientific Photography
4:00 – 4:15 pm	High Tea
4:15 – 5:15 pm	Valediction

Venue: Pranakrushna Parija Auditorium (PPA), NIT Rourkela

Chairman
Prof. Kunal Pal

Convenors
Prof. Ravi Kant Avvari
Prof. Bala Chakravarthy Neelapu
Prof. Singam Jayanthu

Valedictory Schedule

Day 2: December 23, 2022 (Friday)

4:15 pm	Inviting guests on to Dais
4:20 pm	Welcome address by HoD, MN, NIT Rourkela
4:25 pm	Report by Convener Dr. Ravi Kant Avvari, Asst. Professor, BM, NIT Rourkela
4:30 pm	Recommendations of NBC2022 by Co-Convener Prof. Singam Jayanthu, Professor, MN, NIT Rourkela
4:35 pm	Feedback from delegates and participants
4:45 pm	Address by " <i>Guest of Honor</i> " Miss Ava Apat, Sr. Manager, CCL
4:50 pm	Address by " <i>Chief Guest</i> " Prof. Santanu Paria, Professor, CH, NIT Rourkela
4:55 pm	Felicitation
5:10 pm	Vote of thanks by Prof. Bala Chakravarthy N., Asst. Professor, BM, NIT Rourkela