

V. S. P. M. Academy of Higher Education, Nagpur

***Jawaharlal Nehru Arts, Commerce &  
Science College Wadi, Nagpur***

***Conference Report***



**National Conference**

*On*

**Innovations in Science & Technology for Sustainable Development  
(ISTSD-2025)**

*Organized by*

**Department of Physics & Mathematics**

*On*

**22<sup>nd</sup>, February, 2025**



VSPM Academy of Higher Education Nagpur's

**Jawaharlal Nehru Arts, Commerce and Science  
College, Wadi, Nagpur- 440023 (M.S.)**

(Affiliated to RTM Nagpur University, Nagpur)

Website: [www.jncwadi.ac.in](http://www.jncwadi.ac.in)

E-mail: [jnc.wadi@rediffmail.com](mailto:jnc.wadi@rediffmail.com)

Phone: (07104) 220963



***National Conference***

on

**Innovations in Science & Technology for Sustainable Development**

**(ISTSD-2025)**

<b>Name of the Department -</b>	<b><i>Department of Physics &amp; Mathematics</i></b>
<b>Name of the Organizers -</b>	Dr. S. S. Tekade, Principal Dr. G. D. Zade, Convener Dr. A. R. Nagpure, Org. Secretary Dr. N. V. Gharad, IQAC Coordinator
<b>Title of the Event/ Programme -</b>	<b><i>National Conference on Innovations in Science &amp; Technology for Sustainable Development (ISTSD-2025)</i></b>
<b>Date of the Programme -</b>	<b>22 February 2025</b>

**Objective of the event/Programme:**

- The National Conference seeks to bring together scientists, researchers, social reformers, innovators, and distinguished speakers from various fields onto a shared platform to discuss and showcase research and innovations aimed at promoting sustainable development in science.
- Through keynote lectures, research talks, and presentations, the conference aims to unite visionary scholars from diverse disciplines to explore strategies for fostering development and driving transformation in rural India.
- Participants from diverse disciplines and regions will have an exceptional opportunity to engage in a national forum focused on advancements in science and technology.
- Esteemed researchers, scholars, and academicians will convene to explore critical issues, share innovative ideas, and discuss recent developments in their respective fields, all centered on fostering sustainable development.

**Conference themes:**

Material synthesis & characterization  
Ultra Sonics  
Optics and photonics system  
Organic & sustainable electronics  
Process control and instrumentation

Luminescence & its application  
Electricity & solar cell  
Electronics in renewal energy  
Sensors & actuators  
Magnetic materials

<p>Nano science and technology  Material characterization, application and instrumentation  Green &amp; sustainable chemistry  Green energy technology  Industrial chemistry  Environmental chemistry  Plant physiology &amp; biochemistry  Aquaculture management systems  Biodiversity conservation for rural development  Use for bio-fertilization and conservation of rural ecosystem  Insect pest management  Agriculture and rural development  Agriculture trade  Fisheries and drainage  Quantum computing  Augmented reality  Cyber security  Edge computing  Algebra &amp; number theory  Applied mathematics &amp; computation theory  Relativity  Livestock and animal resources  Quantum computing  Augmented reality  Cyber security  Edge computing  Algebra &amp; number theory</p>	<p>Applied mathematics &amp; computation theory  Synthetic chemistry  Fuel cell &amp; batteries  Chemical synthesis  Life science for rural development  Aquaculture technology systems  Probability &amp; data science  Relativity  Biofuels and renewable energy  Agriculture risk management  Irrigation and drainage  Organic farming  Artificial intelligence  Internet of things  Cloud computing  Robotics  Analytics  Cosmology  Probability &amp; data science  Organic farming  Artificial intelligence  Internet of things  Cloud computing  Robotics  Analytics</p>
<p><b>Total No. of the Participant-</b></p>	<p><b>Two hundred seventy one (271)</b></p>
<p><b>Expert for National Conference -</b></p>	<p><b>First technical session-</b></p> <ul style="list-style-type: none"> <li>• Dr. (Mrs.) Vaishali Bambole (Resource person)  Dept. of Physics, Mumbai University, Mumbai.</li> </ul> <p><b>Topic- Marching Sustainable towards 2025</b></p> <p><b>Second technical session-</b></p> <ul style="list-style-type: none"> <li>• Dr. S. J. Dhoble (Resource person)  Dept. of Physics, R. T. M. Nagpur University, Nagpur.</li> </ul> <p><b>Topic- Multidisciplinary applications of phosphors</b></p> <p><b>Third technical session-</b></p> <ul style="list-style-type: none"> <li>• Dr. Vibha Chopra, (Resource person)  Department of Physics, Guru Gram University,  Haryana.</li> </ul> <p><b>Topic- Effects of radiation on health &amp; its protection.</b></p> <p><b>Assessment of posters -</b></p> <ul style="list-style-type: none"> <li>• Dr. G. D. Kedar (Resource person)  Prof. &amp; Head, Dept. of Mathematics,  R. T. M. Nagpur University, Nagpur</li> <li>• Dr. S. B. Kondawar (Resource person)  Chairman, Board of Studies in Physics,  R. T. M. Nagpur University, Nagpur.</li> </ul>

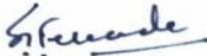
S. No	Name of the Event	Report
1	<b>Inaugural function-</b>	<p style="text-align: center;"><b>Chairman</b> Hon. Dr. Ashishrao R. Deshmukh, MLA, Saoner – Kalmeswar Constituency Vice President, V. S. P. M. Academy of Higher Education Nagpur.</p> <p style="text-align: center;"><b>Inauguration by the hands of</b> Hon. Dr. Rajendra B. Kakde Pro Vice Chancellor, R. T. M. Nagpur University, Nagpur</p> <p style="text-align: center;"><b>Guest of Honour</b> Hon. Shri. Y. D. Chalkhor, Secretary, V. S. P. M. Academy of Higher Education, Nagpur</p> <p style="text-align: center;"><b>Organizer, ISTSD-2025</b> Hon. Dr. Sanjay S. Tekade, Principal, J. N. College, Wadi, Nagpur.</p> <p style="text-align: center;"><b>Venue- College Auditorium</b></p> <ul style="list-style-type: none"> <li>• Dr. G. D. Zade Convener, ISTSD-2025</li> <li>• Dr. A. R. Nagpure Org. secretary, ISTSD-2025</li> <li>• Dr. N. V. Gharad Co-Ordinator, IQAC</li> </ul>
2	<b>First technical session-</b>	<ul style="list-style-type: none"> <li>• Dr. (Ms.) M. M. Bhatkulkar (Session Coordinator) Prof., Dept. of Zoology</li> <li>• Dr. (Smt.) S. A. Acharya (Session Chairperson) Dept. of Physics, R. T. M. Nagpur University, Nagpur.</li> <li>• Dr. (Mrs.) Vaishali Bambole (Resource person) Dept. of Physics, Mumbai University, Mumbai.</li> </ul> <p style="text-align: center;"><b>Topic- Marching Sustainable towards 2025</b></p>
3	<b>Second technical session -</b>	<ul style="list-style-type: none"> <li>• Dr. S. S. Khadse (Session Coordinator) Director, Physical Education.</li> <li>• Dr. O. P. Chimankar (Session Chairperson) Prof. &amp; Head, Dept. of Physics, R. T. M. Nagpur University, Nagpur.</li> <li>• Dr. S. J. Dhoble (Resource person) Prof., Dept. of Physics, R. T. M. Nagpur University, Nagpur.</li> </ul> <p style="text-align: center;"><b>Topic- Multidisciplinary applications of phosphors</b></p>
4	<b>Third technical session -</b>	<ul style="list-style-type: none"> <li>• Dr. A. U. Deore (Session Coordinator) Prof. Dept. of Zoology</li> <li>• Dr. Abhay Deshmukh, (Session Chairperson) Dept. of Physics, R. T. M. Nagpur University, Nagpur.</li> <li>• Dr. Vibha Chopra, (Resource person) Department of Physics, Guru Gram University, Haryana.</li> </ul> <p style="text-align: center;"><b>Topic- Effects of radiation on health &amp; its protection.</b></p>
5	<b>Poster assessment -</b>	<ul style="list-style-type: none"> <li>• Dr. G. D. Kedar (Resource person) Prof. &amp; Head, Dept. of Mathematics, R. T. M. Nagpur University, Nagpur</li> <li>• Dr. S. B. Kondawar (Resource person) Chairman, Board of Studies in Physics, R. T. M. Nagpur University, Nagpur</li> </ul>

6	<b>Valedictory function -</b>	<ul style="list-style-type: none"> <li>• Hon. Shri Y. D. Chalkhor, (President) Secretary, V. S. P. M. Academy of Higher Education Nagpur</li> <li>• Hon. Dr. G. D. Kedar (Chief Guest) Prof. &amp; Head, Dept. of Mathematics, R. T. M. Nagpur University, Nagpur</li> <li>• Hon. Dr. S. B. Kondawar (Guest of Honor) Chairman, Board of Studies in Physics, R. T. M. Nagpur University, Nagpur</li> <li>• Hon. Dr. Sanjay S. Tekade, (Guest of Honor) Principal, J. N. College Wadi, Nagpur.</li> </ul>
7	<b>Outcome-</b>	<ul style="list-style-type: none"> <li>• Total online registration received = <b>210</b></li> <li>• Total offline registration received = <b>61</b></li> <li>• All total registration for the National conference was <b>271</b>. [Faculty &amp; Students].</li> <li>• It's a huge response.</li> <li>• Total posters received for the poster presentation was 125.</li> <li>• A hard copy of souvenir with ISBN number was published containing all 125 abstracts.</li> <li>• MOU was signed in between the College and <i>INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS</i> for paper publication.</li> <li>• In all <b>33</b> full length research papers were received for publications.</li> <li>• The National Conference was successfully completed with positive remark from the participants.</li> </ul>

  
**Dr. N. V. Gharad**  
 IQAC, Co-ordinator

  
**Dr. A. R. Nagpure**  
 Org. secretary

  
**Dr. G. D. Zade**  
 Convener

  
**Dr. S. S. Tekade**  
 Principal

## Conference brochure



VSPM Academy of Higher Education, Nagpur's  
**JAWAHARLAL NEHRU ARTS,  
COMMERCE & SCIENCE COLLEGE WADI, NAGPUR**

(Institution of Higher Learning, Research & Specialized Studies)

NAAC Re-Accredited B+, ISO 9001: 2019

(Affiliated to R.T.M. Nagpur University, Nagpur)



## National Conference

On

### Innovations in Science & Technology for Sustainable Development (ISTSD-2025)

Organized by

### Department of Physics & Mathematics

On

22<sup>nd</sup>, February, 2025

Dr. S.S. Tekade, Principal (7774054405)

Dr. G.D. Zade, Convener (9890628608 / 9511680857)

Dr. A.R. Nagpure, Org. Secretary (9890199330)

Dr. N.V. Gharad, IQAC Coordinator (9881341908)

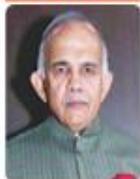
Website: [www.jncwadi.ac.in](http://www.jncwadi.ac.in)

E-mail: [jnc.wadi@rediffmail.com](mailto:jnc.wadi@rediffmail.com)

Conference E-Mail: [ists2025jncwadi@gmail.com](mailto:ists2025jncwadi@gmail.com)

## INAUGURAL SESSION

Patron & Chairman



Hon'ble  
Shri Ranjeetbabu A. Deshmukh

Patron & Founder



Hon'ble  
Dr. Bhausaheb Bhoge

Working Chairman



Hon'ble  
Dr. Ashishbabu R. Deshmukh

Hon. Secretary



Hon. Shri. Y. D. Chalkhor

Chief Guest



Hon. Dr. Rajendra B. Kakde

Principal



Dr. Sanjay S. Tekade

Speakers



**Dr. Sanjay J. Dhoble**  
Sr. Professor Dept. of Physics,  
KTM Nagpur University, Nagpur  
Topic : Multidisciplinary  
Applications of Phosphors



**Dr. Vaishali Bambole**  
Sr. Professor Dept. of Physics,  
University of Mumbai  
Topic : Marching Sustainable  
towards 2050



**Dr. Vibha Chopra**  
Asso. Professor Dept. of Physics,  
Guru Gram University, Haryana  
Topic : Effects of radiation on  
Health & its Protection

Convener



Dr. G. D. Zade

Organizing Secretary



Dr. A. R. Nagpure

IQAC, Coordinator



Dr. N. V. Gharad

Dear Sir/Madam,

It gives us immense pleasure to inform you that Jawaharlal Nehru Arts, Commerce & Science College, Wadi, Nagpur, is organizing a National Conference on "Innovations in Science & Technology for Sustainable Development" (ISTSD-2025) in 22nd February 2025. The aim of this National Conference is to provide a platform for exchanging ideas and fostering interactions among scholars and students in the fields of science and technology. We would be delighted to welcome you and your esteemed colleagues to the conference and look forward to extending a warm reception.

### ABOUT THE COLLEGE



Jawaharlal Nehru Arts, Commerce & Science College, Wadi, Nagpur, established on 13th July 1990, has been a beacon of academic excellence and innovation since its inception, offering quality education to rural communities. Over the years, the college has maintained its commitment to excellence in both curricular and extracurricular activities, consistently achieving new milestones.

As a multidisciplinary institution, the college caters to the intellectual aspirations of young minds, primarily from rural areas. Its well-developed campus features modern infrastructure, including state-of-the-art laboratories, a multi-purpose playground, a centralized digital library, a green and eco-friendly environment, and a versatile auditorium-facilities that symbolize our pride and dedication to holistic education.

Yet, the true strength of an educational institution lies beyond its physical infrastructure. It resides in the expertise, dedication, and passion of its educators. Our faculty members are committed to academic excellence and innovation, fostering intellectual growth and creative pursuits. The college is home to a team of proficient, skilled, and accomplished educators, supported by an enthusiastic and efficient non-teaching staff, all working collaboratively to ensure the institution's success.

The management, under the dynamic leadership of Hon. Shri Ranjeetbabu A. Deshmukh (Chairman, V.S.P.M. Academy of Higher Education, Nagpur), Hon. Dr. Bhausaheb Bhoge (Founder, V.S.P.M. Academy of Higher Education, Nagpur), Hon. Dr. Ashishrao R. Deshmukh (Working Chairman, V.S.P.M. Academy of Higher Education, Nagpur), and Hon. Shri Y. D. Chalkhor (Secretary, V.S.P.M. Academy of Higher Education, Nagpur), has always been steadfast in its support for the institution. The vision and precision in leadership at V.S.P.M. Academy of Higher Education, Nagpur, continue to inspire us.

## ABOUT THE CONFERENCE:

The National Conference seeks to bring together scientists, researchers, social reformers, innovators, and distinguished speakers from various fields onto a shared platform to discuss and showcase research and innovations aimed at promoting sustainable development in science.

Through keynote lectures, research talks, and presentations, the conference aims to unite visionary scholars from diverse disciplines to explore strategies for fostering development and driving transformation in rural India.

Participants from diverse disciplines and regions will have an exceptional opportunity to engage in a national forum focused on advancements in science and technology. Esteemed researchers, scholars, and academicians will convene to explore critical issues, share innovative ideas, and discuss recent developments in their respective fields, all centered on fostering sustainable development. We look forward to your participation in ISTSD-2025. Topics of discussion will include:

## CONFERENCE THEMES:

- Material synthesis & characterization
- Luminescence & its application
- Ultra sonics
- Electricity & solar cell
- Optics and photonics system
- Electronics in renewal energy
- Organic & sustainable electronics
- Sensors & actuators
- Process control and instrumentation
- Magnetic materials
- Nanoscience and technology
- Material characterization, application and instrumentation
- Green & sustainable chemistry
- Synthetic chemistry
- Green energy technology
- Fuel cell & batteries
- Industrial chemistry
- Chemical synthesis
- Environmental chemistry
- Life science for rural development
- Plant physiology & biochemistry
- Aquaculture technology systems
- Aquaculture management systems
- Biodiversity conservation for rural development
- Use for bio-fertilization and conservation of rural ecosystem
- Insect pest management
- Biofuels and renewable energy
- Agriculture and rural development
- Agriculture risk management
- Agriculture trade
- Irrigation and drainage
- Fisheries and drainage
- Livestock and animal resources
- Organic farming
- Quantum computing
- Artificial intelligence
- Augmented reality
- Internet of things
- Cyber security
- Cloud computing
- Edge computing
- Robotics
- Algebra & number theory
- Analytics
- Applied mathematics & computation theory
- Cosmology
- Relativity
- Probability & data science

## REGISTRATION:

Participants are requested to register by filling following registration form. Screen shot of fees paid id to be uploaded while filling registration form.

Registration: <https://forms.gle/gijQWjq7Eevvvh327>

## BANK DETAILS:

Beneficiary Name: Principal, J.N.College, Wadi Nagpur  
Bank Name: Bank of Maharashtra Account No.: 60523082529  
Bank Address: Wadi, Nagpur Account Type: Saving  
IFSC Code: MAHB0001926

## SUBMISSION OF ABSTRACT:

Abstract of research paper should be submitted latest by 15th February 2025 through email at [ists2025jncwadi@gmail.com](mailto:ists2025jncwadi@gmail.com) mentioning broad subject as per theme.

## INSTRUCTION FOR ABSTRACT

Format of abstract

- Font type: times new roman
- Title font size: 14 pt
- Author name, co-author name, designation, main abstract text 12 pt
- Keyword 12 pt
- Spacing 1.5 pt
- Word limit: 250
- Page layout: portrait
- Page size: A4

## REGISTRATION CHARGES:

Academic faculty/ Industrial delegate	Rs. 800 IR
Research scholar, students (UG and PG)	Rs. 300 IR
Additional charges for Research paper publication	Rs. 700 IR
1. UGC Care-listed 2. Peer reviewed journals	Research paper Publication charges (Rs. 700 IR) will be deposited after the acceptance of the full paper

## SUBMISSION OF FULL-LENGTH

## RESEARCH PAPER:

Full length research paper, maximum in 6 pages, should be submitted through email at [ists2025jncwadi@gmail.com](mailto:ists2025jncwadi@gmail.com) mentioning broad subject as per theme. Templates of the paper will be provided after registration.

**Best Poster Presentation:** ▶ • 1st Prize - Rs. 3000/- • 2nd Prize - Rs. 2000/- • 3rd Prize - Rs. 1000/-



## ORGANIZING COMMITTEE

### PATRON:

- Hon. Shri Ranjeetbabu A. Deshmukh (Chairman, V.S.P.M. Academy of Higher Education Nagpur)
- Hon. Dr. Bhausaheb Bhogre (Founder, V.S.P.M. Academy of Higher Education Nagpur)
- Hon. Dr. Ashishrao R. Deshmukh (Working Chairman, V.S.P.M. Academy of Higher Education Nagpur)
- Hon. Shri. Y. D. Chalkhor (Secretary, V.S.P.M. Academy of Higher Education Nagpur)
- Dr. S. W. Chawan (Joint Director, Higher Education, Nagpur)
- Dr. Rajendra Kakade (Pro. Vice Chancellor, R.T.M. Nagpur University, Nagpur)
- Dr. Prashant Maheshwari (Dean, Faculty of Science & Technology, R.T.M. Nagpur University, Nagpur)

### NATIONAL ORGANIZING COMMITTEE:

- Dr. S. V. Moharil (Ex Prof & Head, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. R. B. Pote (Prof, Kyung Hee University, Seoul, South Korea)
- Dr. Vilas Tabhane (Ex Prof, S.P. Pune University, Pune)
- Dr. S. S. Bhoga (Ex Prof & Head, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. J. M. Khobragade (Director, Institute of Science Nagpur)
- Dr. Vivek Nanoti (Director, Priyadarshini College of Engineering Nagpur)
- Dr. (Mrs.) Vaishali Bombale (Professor, Mumbai University, Mumbai)
- Dr. T. M. Karde (Ex Prof & Head, Dept. of Maths, R.T.M.N.U., Nagpur)
- Dr. K. C. Deshmukh (Ex Prof & Head, Dept. of Maths, R.T.M.N.U., Nagpur)
- Dr. G. S. Khadekar (Ex Prof & Head, Dept. of Maths, R.T.M.N.U., Nagpur)
- Dr. (Mrs.) Sharayu B. Taywade (Principal, Art, Commerce, Science College, Koradi)
- Dr. S. B. Kondawar (Chairman, BoS Physics, R.T.M.N.U., Nagpur)
- Dr. R. M. Jugade (Chairman, BoS Chemistry, R.T.M. Nagpur University Nagpur)
- Dr. W.B. Gurnule (Professor, Kamla Nehru College Nagpur)
- Dr. O. P. Chimankar (Head, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. S. J. Dhoble (Professor, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. G. D. Kedar (Head, Dept. of Maths, R.T.M.N.U., Nagpur)
- Dr. N. N. Karde (Head, Dept. of Chemistry, R.T.M.N.U., Nagpur)
- Dr. D. D. Barsagade (Head, Dept. of Zoology, R.T.M.N.U., Nagpur)
- Dr. N. M. Dongarwar (Head, Dept. of Botany, R.T.M.N.U., Nagpur)
- Dr. (Mrs.) Anupma Sakhare (Head, Dept. of Computer Science, R.T.M.N.U., Nagpur)
- Dr. (Mrs.) Smita Acharya (Dept. of Physics, R.T.M. Nagpur University Nagpur)
- Dr. R. M. Gade (Professor, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. (Mrs.) Sushma Giripunjee (Associate Professor, VNIT Nagpur)
- Dr. (Mrs.) N. T. Kalyani (IIT University, Nagpur)
- Dr. V.B. Pawade (IIT University, Nagpur)
- Dr. Parag Nimise (Principal, Bhalerao Science College, Saoner)
- Dr. C. Dudhe (Institute of Science Nagpur)
- Dr. A. K. Tikhe (Principal, K.Z.S. College, Kalmeshwar)
- Dr. D. S. Badwaik (Principal, Kamla Nehru College, Nagpur)
- Dr. D. S. Bhongade (Principal, Antyoday Mahavidyalaya Devgram)
- Dr. Prakash D. Pawar (Principal A.B. College Bharshingi, Katol, Nagpur)
- Dr. Ajay Sharma (Principal, C.J. Patel College Tiroda, Gondia)
- Dr. D. N. Khadse (Principal, M.G. College Parshiwani, Nagpur)
- Dr. V. M. Tangde (Ass. Professor, Dept. of Chemistry, R.T.M.N.U., Nagpur)
- Dr. U. A. Palikundwar (Professor, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. Abhay Deshmukh (Professor, Dept. of Physics, R.T.M.N.U., Nagpur)
- Dr. J. R. Dontulwar (Principal, Shri M. Mohota Science College Nagpur)
- Dr. K. G. Rewatkar (Principal, Vidya Vikas College Samudrapur, Wardha)
- Dr. I. S. Mohurley (Principal, S.S. Jaiswal College Arjuni (Mor), Gondia)
- Dr. N. Y. Lanje (Principal, Jagat A.C. & I.H.P. Sci. College Goregaon, Gondia)
- Dr. D. V. Nandanwar (Principal, Girls College Bhandara)
- Dr. J. N. Ramteke (Professor, Shri M. Mohota Science College Nagpur)

### COORDINATORS:

- |                                     |                                |
|-------------------------------------|--------------------------------|
| Dr. (Mrs.) L. V. Phate (English)    | Dr. N. R. Petkar (English)     |
| Dr. (Mrs.) R. P. Kurhekar (Library) | Dr. S. K. Shembekar (Commerce) |
| Dr. S. S. Khadse (Sports)           | Prof. R. S. Barve (Sociology)  |
| Dr. N. C. Kongre (Chemistry)        | Dr. A. N. Ingle (Chemistry)    |
| Dr. (Ms) M. M. Bhatkulkar (Zoology) | Dr. K. S. Manmode (History)    |
| Dr. A. U. Deore (Zoology)           | Ms. Pranali Kamatwar (Physics) |
| Dr. (Mrs.) N. H. Kamble (Commerce)  | Ms. Aishwarya Gawande (Maths)  |
| Dr. A. K. Deshmukh (English)        |                                |

### LOCAL ORGANIZING COMMITTEE:

- |                                 |                                    |
|---------------------------------|------------------------------------|
| Dr. H. Ahmad (Nagpur)           | Dr. Ulkare (Tiroda)                |
| Dr. Choubay (Nagpur)            | Dr. Warhate (Tumsar)               |
| Dr. Choudhari (Gondia)          | Dr. (Mrs.) Wazalwar (Nagpur)       |
| Dr. Dhadade (Katol)             | Dr. Yoel (Nagpur)                  |
| Dr. Ambekar (Nagpur)            | Dr. Zade (Hinganghat)              |
| Dr. Anwane (Nagpur)             | Dr. Damodare (Nagpur)              |
| Dr. Bankar (Pauni)              | Dr. Asolkar (Nagpur)               |
| Dr. Bisen (Lakhandur)           | Dr. Bagade (Pulgaon)               |
| Dr. Chinchmalatpure (Aashti)    | Dr. Gahane (Nagpur)                |
| Dr. Choudhari (Arjuni Mor)      | Dr. Hatwar (Nagpur)                |
| Dr. Dabrase (Saoner)            | Dr. Jumale (Hinganghat)            |
| Dr. Dabre (Koradi)              | Dr. Kharabe (Nagpur)               |
| Dr. Dange (Nagpur)              | Dr. Meshram (Sakoli)               |
| Dr. (Mrs.) Gharpure (Bharsingi) | Dr. Bagade (Wardha)                |
| Dr. Madavi (Bharsingi)          | Dr. Rajpurkar (Umred)              |
| Dr. Gadre (Bharsingi)           | Dr. Kohale (Hingna)                |
| Dr. Taikar (Kuhimandhal)        | Dr. (Mrs.) Pawar (Nagpur)          |
| Dr. Dongre (Saoner)             | Dr. Pund (Nagpur)                  |
| Dr. Taikar (Tiroda)             | Dr. Sarve (Nagpur)                 |
| Dr. Yerawar (Arvi)              | Dr. Janardhan (Nagpur)             |
| Dr. Gedam (Kalmeshwar)          | Dr. Agrawal (Nagpur)               |
| Dr. Goswami (Nagpur)            | Dr. (Mrs.) Dehari (Nagpur)         |
| Dr. (Mrs.) Hardas (Nagpur)      | Dr. Bhake (Saoner)                 |
| Dr. Mahatme (Kalmeshwar)        | Dr. (Mrs.) Salve (Saoner)          |
| Dr. (Mrs.) Sonwane (Bhandara)   | Dr. Soni (Gondia)                  |
| Dr. Nandanwar (Bhandara)        | Dr. Wasnik (Gondia)                |
| Dr. Nakhate (Koradi)            | Dr. Charjan (Kalmeshwar)           |
| Dr. Puppulwar (Nagpur)          | Dr. Galkwad (Nagpur)               |
| Dr. Raghorte (Karanja)          | Dr. Shende (Nagpur)                |
| Dr. Sarve (Samudrapur)          | Dr. Qureshi (Nagpur)               |
| Dr. Shingade (Amgaon)           | Dr. (Mrs.) Wanjari (Nagpur)        |
| Dr. Soman (Nagpur)              | Dr. Madam (Bhandara)               |
| Dr. G. Lakhotiya (Nagpur)       | Dr. Shende (Bhandara)              |
| Dr. RajuBelekar (Nagpur)        | Dr. Rathod (Nagpur)                |
| Dr. Amit Bansod (Nagpur)        | Dr. Tambatkar (Nagpur)             |
| Dr. Mahajan (Nagpur)            | Dr. Lepse (Paoni)                  |
| Dr. S. Panchbhair (Seloo)       | Dr. Dhongle (Kamptee)              |
| Dr. B.M. Bahirwar (Ballarsha)   | Dr. (Mrs.) Hazare (Nagpur)         |
| Dr. P. Moharkar (Chandrapur)    | Dr. Katre (Katol)                  |
| Dr. Gawali (Chandrapur)         | Dr. Katre (Wardha)                 |
| Dr. Pimpalshende (Chandrapur)   | Dr. Tripathi (Nagpur)              |
| Dr. V. Manik (Chandrapur)       | Dr. Lamba (Kuhimandhal)            |
| Dr. P. Wasnik (Lakhandur)       | Dr. Warbhe (Nagpur)                |
| Dr. A. Deshpande (Amgaon)       | Dr. (Mrs.) Saundurkar (Samudrapur) |
| Dr. C. P. Chaudhari (Nagpur)    | Dr. (Mrs.) Anturkar (Hingna)       |
| Dr. S. Kasarla (Nagpur)         | Dr. Hussain (Karanja Gad.)         |
| Dr. (Mrs.) K. Nagde (Nagpur)    | Dr. Khan (Pulgaon)                 |
| Dr. Y. Wankhede (Nagpur)        | Dr. Shastrakar (Seloo)             |
| Dr. D. Nandagawali (Nagpur)     | Dr. Dolas (Mouda)                  |
| Dr. (Mrs.) S. Deshmukh (Nagpur) | Dr. Galkwad (Bharsingi)            |
| Dr. K. Aiti (Nagpur)            | Dr. Dhurakar (ArjuniMoh.)          |
| Dr. S. Patil (Nagpur)           | Dr. (Mrs.) Hiranwar (Nagpur)       |
| Dr. C. Chaudhari (Nagpur)       | Dr. Mishra (Bhivapur)              |
| Dr. Ghumde (Karanja)            | Dr. Lanjewar (Sakoli)              |
| Dr. (Mrs.) John (Nagpur)        | Dr. Katkar (Koradi)                |
| Dr. Mullemwar (Mouda)           | Dr. Dhonde (Nagpur)                |
| Dr. Tapre (Seloo)               | Dr. Bhaskar (Koradi)               |
| Dr. Thakre (Aashti)             | Dr. Anturkar (Hingna)              |
| Dr. Thakur (Goregaon)           | Dr. Khobragde (Arvi)               |
| Dr. Wakade (Karanja)            | Dr. Tade (Nagpur)                  |

## Invitation Card



VSPM Academy of Higher Education, Nagpur's  
**JAWAHARLAL NEHRU ARTS,  
COMMERCE & SCIENCE COLLEGE WADI, NAGPUR**  
(Institution of Higher Learning, Research & Specialized Studies)  
NAAC Re-Accredited B+, ISO 9001: 2019  
(Affiliated to R.T.M. Nagpur University, Nagpur)

### INVITATION

## National Conference

**"Innovations in Science & Technology for Sustainable Development"**

*Organized by*

**Department of Physics & Mathematics**

on Saturday, 22<sup>nd</sup> February, 2025 | at 9.30 a.m.

You are kindly invited to grace the Inaugural function  
of National Conference [ISTSD-2025]

Chairman

**Hon. Dr. Ashishrao R. Deshmukh**

MLA, Saoner-Kalmeswar Constituency  
Vice President, V.S.P.M. Academy of Higher Education Nagpur

Inauguration by the hands of

**Hon. Dr. Rajendra B. Kakde**

Pro Vice Chancellor, R.T.M. Nagpur University, Nagpur

Guest of Honour

**Hon. Shri. Y. D. Chalkhor**

Secretary, V.S.P.M. Academy of Higher Education, Nagpur

**Hon. Dr. Sanjay S. Tekade**

Principal, J.N. College, Wadi, Nagpur  
Organizer, ISTSD-2025

Venue

**College Auditorium**

J.N. College, Wadi, Nagpur

**Dr. G. D. Zade**

Convener

**Dr. A. R. Nagpure**

Org. secretary

**Dr. N. V. Gharad**

IQAC, Co-ordinator

## CONFERENCE SCHEDULE

Time	Event	Name of Chief Guest / Experts
8:00 am to 9:30 am		<b>Registration &amp; Breakfast</b>
9:30 am to 10:30 am	Inaugural Ceremony (College Auditorium)	<ul style="list-style-type: none"> <li>• <b>Hon. Dr. Ashishbabu R. Deshmukh</b> [MLA] (President) Vice Chairman, V.S.P.M. Academy of Higher Education Nagpur</li> <li>• <b>Hon. Dr. Rajendra B. Kakde</b> (Inaugurator) Pro Vice Chancellor, R.T.M. Nagpur University, Nagpur</li> <li>• <b>Hon. Shri Y.D. Chalkhor</b> (Chief Guest) Secretary, V.S.P.M. Academy of Higher Education Nagpur</li> <li>• <b>Hon. Dr. Sanjay S. Tekade</b> (Guest of Honor) Principal, J.N. College Wadi, Nagpur</li> </ul>
10:30 am to 12:00 Noon	Technical Session-01 (College Auditorium)	• <b>Dr. (Ms.) M. M. Bhatkulkar</b> (Session Coordinator) Prof., Dept. of Zoology
		• <b>Dr. (Smt.) S.A. Acharya</b> (Session Chairperson) Prof., Dept. of Physics, R.T.M. Nagpur University, Nagpur.
		• <b>Dr. (Mrs.) Vaishali Bambole</b> (Resource person) Prof., Dept. of Physics, Mumbai University, Mumbai <b>Topic - Marching Sustainable towards 2025</b>
12:00 Noon to 1:30 pm	Technical Session-02 (College Auditorium)	• <b>Dr. S. S. Khadse</b> (Session Coordinator) Director, Physical Education
		• <b>Dr. O.P. Chimankar</b> (Session Chairperson) Prof. & Head, Dept. of Physics, R.T.M. Nagpur University, Nagpur
		• <b>Dr. S.J. Dhoble</b> (Resource person) Prof., Dept. of Physics, R.T.M. Nagpur University, Nagpur <b>Topic - Multidisciplinary applications of phosphors</b>
1:30 pm to 2:30 pm	Lunch	College Lawn
2:30 pm to 3:30 pm	Technical Session-03 (College Auditorium)	• <b>Dr. A.U. Deore</b> (Session Coordinator) Prof. Dept. of Zoology
		• <b>Dr. Abhay D. Deshmukh</b> (Session Chairperson) Dept. of Physics, R.T.M. Nagpur University, Nagpur
		• <b>Dr. Vibha Chopra</b> (Resource person) Associate Professor, Department of Physics, Guru Gram University, Haryana. <b>Topic - Effects of radiation on health &amp; its protection</b>
3:30 pm to 4:00 pm	Poster presentation (Second Floor)	<ul style="list-style-type: none"> <li>• <b>Dr. G.D. Kedar</b> (Resource person) Prof. &amp; Head, Dept. of Mathematics, R.T.M. Nagpur University, Nagpur</li> <li>• <b>Dr. S.B. Kondawar</b> (Resource person) Chairman, Board of Studies in Physics, R.T.M. Nagpur University, Nagpur</li> </ul>
4:00 pm & onwards	Valedictory Session (College Auditorium)	<ul style="list-style-type: none"> <li>• <b>Hon. Shri Y.D. Chalkhor</b> (President) Secretary, V.S.P.M. Academy of Higher Education Nagpur</li> <li>• <b>Hon. Dr. G.D. Kedar</b> (Chief Guest) Prof. &amp; Head, Dept. of Mathematics, R.T.M. Nagpur University, Nagpur</li> <li>• <b>Hon. Dr. S.B. Kondawar</b> (Guest of Honor) Chairman, Board of Studies in Physics, R.T.M. Nagpur University, Nagpur</li> <li>• <b>Hon. Dr. Sanjay S. Tekade</b> (Guest of Honor) Principal, J.N. College Wadi, Nagpur.</li> </ul>

*Welcome participants & Guests*





*Registration counter*





*Research student participation*



*Welcome guest for Inauguration*





*Inaugural function*













*Publication of Souvenir*



*Inaugural talk*





## *Participants*





*First technical session by Dr Vaishali Bambole [Mumbai University, Mumbai]*







*Chairperson Dr. Smita Acharya [R. T. M. Nagpur University, Nagpur]*



*Second technical session by Dr. Sanjay Dhoble [R. T. M. Nagpur University, Nagpur]*





*Chairperson Dr. O. P. Chimankar [R. T. M. Nagpur University, Nagpur]*



*Third technical session by Dr Vibha Chopda [Guru Gram University, Haryana]*

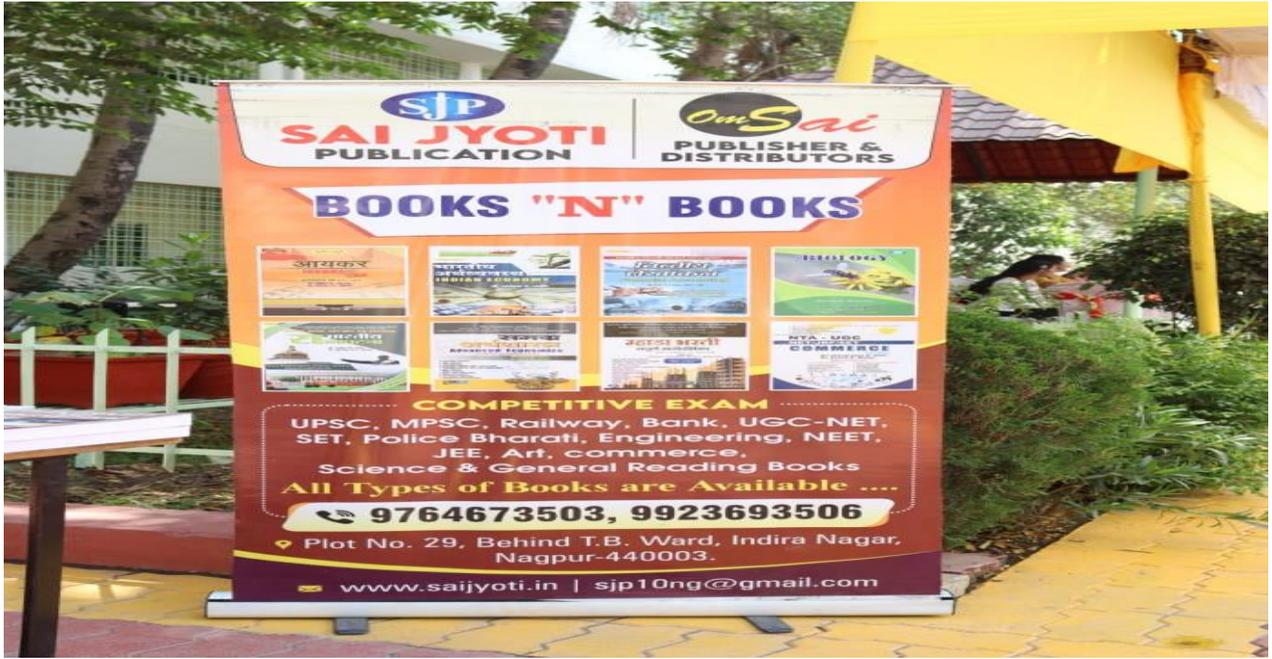




*Chairperson Dr. Abhay Deshmukh [R. T. M. Nagpur University, Nagpur]*



*Book exhibition*





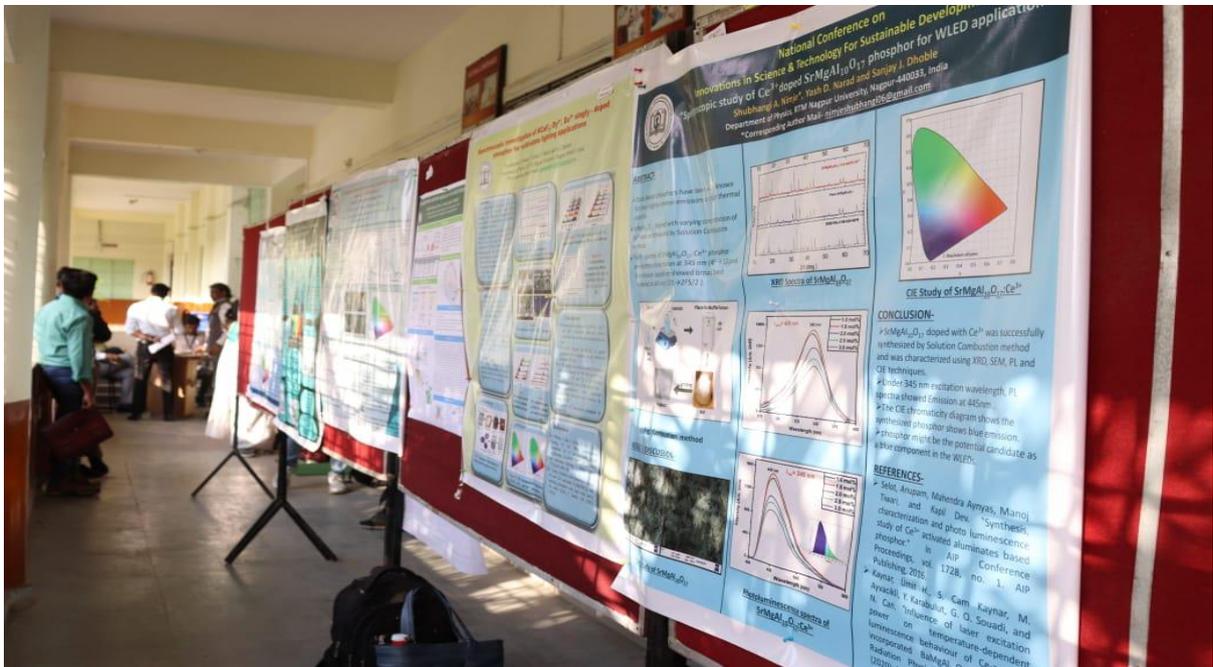
*Lunch*





## Assessment of Posters

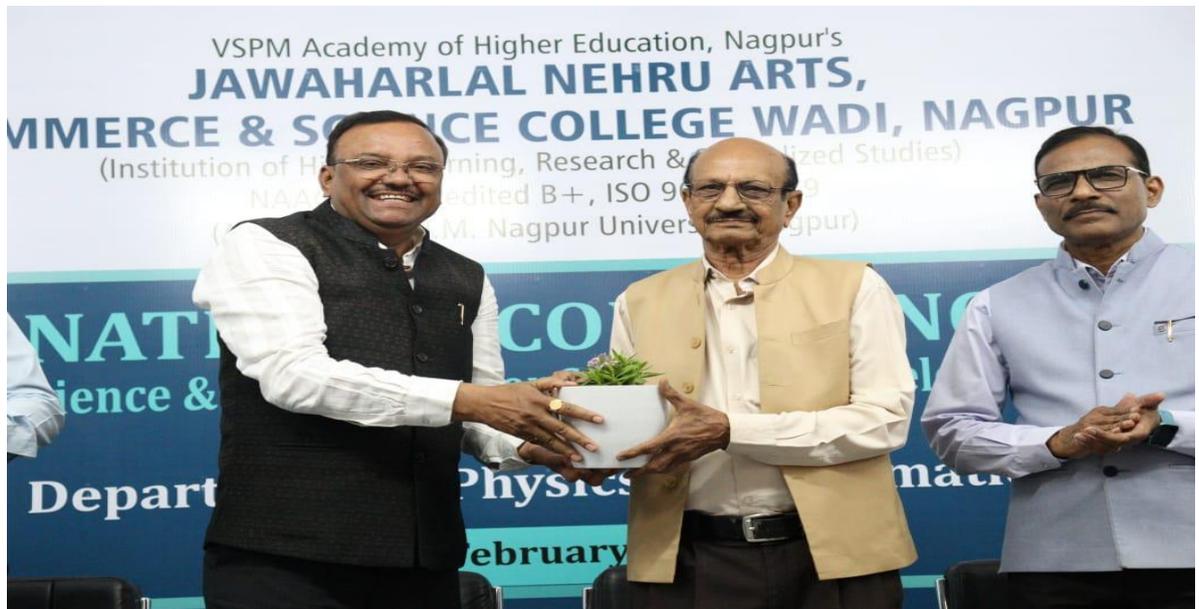








*Valedictory function*





*Third winner in poster presentation  
[A. J. Khobragade, Government Polytechnique College, Sadar, Nagpur]*



**Second winner in poster presentation**  
**[P. M. Thakre, Dept. of Biotechnology, Dr. Ambedkar College, Nagpur]**



**First winner in poster presentation**  
**[Merciana N. Sylvester, Dept. of Physics, R. T. M. Nagpur University, Nagpur]**



**Conference Feedback Remark**

**Faculty Member**  
**Dr. L. P. Damodare, Hislop College Nagpur.**

**P.G. Student**  
**Ms. Snehal Panchbhai**







*Certificate for participants*



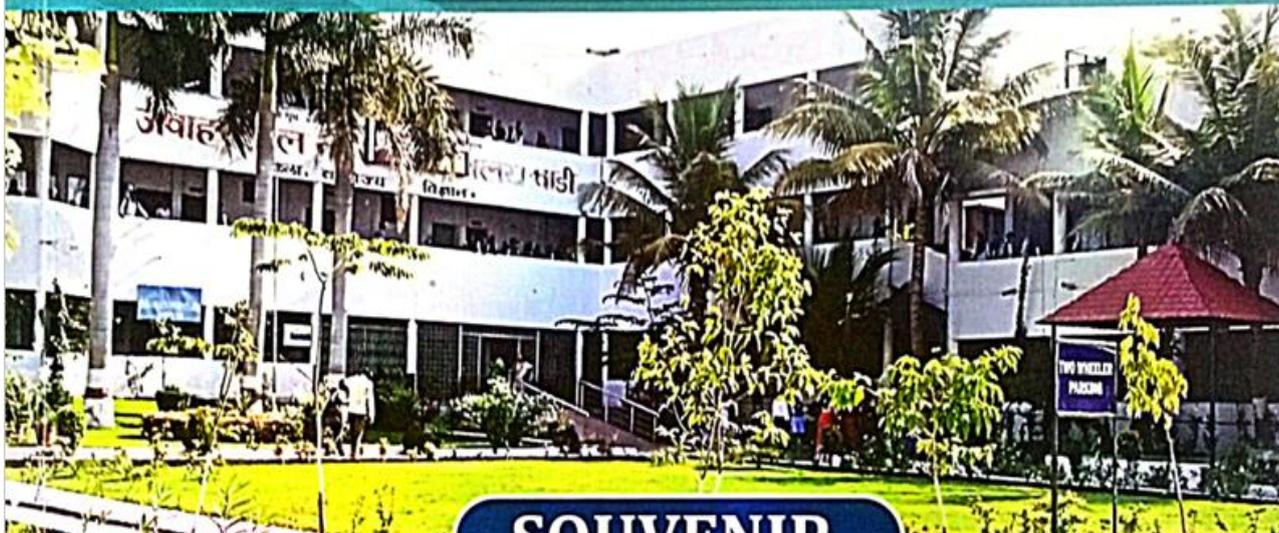
*Folder and conference materials*





ISBN No.: 978-93-48367-89-1

VSPM Academy of Higher Education, Nagpur's  
**JAWAHARLAL NEHRU ARTS,  
COMMERCE & SCIENCE COLLEGE WADI, NAGPUR**  
(Institution of Higher Learning, Research & Specialized Studies)  
NAAC Re-Accredited B1, ISO 9001: 2019  
(Affiliated to R.T.M. Nagpur University, Nagpur)



## **SOUVENIR**

### **National Conference**

*On*

**Innovations in Science & Technology for Sustainable Development  
(ISTSD-2025)**

*Organized by*

**Department of Physics & Mathematics**

*On*

**22<sup>nd</sup> February, 2025**

Dr. S.S. Tekade, Principal  
Dr. G.D. Zade, Convener  
Dr. A.R. Nagpure, Org. Secretary  
Dr. N.V. Gharad, IQAC Coordinator

Website: [www.jncwadi.ac.in](http://www.jncwadi.ac.in)  
E-mail: [jnc.wadi@rediffmail.com](mailto:jnc.wadi@rediffmail.com)  
Conference E-Mail: [ists2025jncwadi@gmail.com](mailto:ists2025jncwadi@gmail.com)



Registration form



VSPM Academy of Higher Education, Nagpur's  
**JAWAHARLAL NEHRU ARTS,  
COMMERCE & SCIENCE COLLEGE WADI, NAGPUR**  
(Institution of Higher Learning, Research & Specialized Studies)  
NAAC Re-Accredited B+, ISO 9001: 2019 | (Affiliated to R.T.M. Nagpur University, Nagpur)

## National Conference

On

Innovations in Science & Technology for Sustainable Development  
(ISTSD-2025)

Organized by

Department of Physics & Mathematics

On

22<sup>nd</sup>, February, 2025

### Registration Form

I intend to attend the conference/presenting a research paper.

Name: Dr./Mr./Mrs./Ms. Dr. KIRAN DAYARAM LADWANI

Department: Department of Chemistry

Name of College Sevasadan Arts Commerce & Science  
Senior College, Nagpur.

Phone: (Mobile No.) 8080750527

Email: kiran.ladwani@gmail.com

Title of the Abstract Green Chemistry: Driving sustainability  
for a Greener Future - A Review

  
Signature of Participant

## Conference feedback form

VSPM Academy of Higher Education, Nagpur's  
JAWAHARLAL NEHRU ARTS, COMMERCE & SCIENCE COLLEGE  
WADI, NAGPUR.  
National Conference on  
Innovations in Science & Technology for Sustainable Development  
(ISTSD-2025)  
22<sup>nd</sup> February 2025

### Feedback Form

Name of Participant: *Snehal Chaudhari*  
Institute Name: *VMV College, Nagpur.*

Q. 1 How would you rate the overall organization of the conference?

Excellent       Good      Fair      Poor

Q. 2 How would you rate the conference venue and facilities?

Excellent      Good      Fair      Poor

Q. 3 How would you rate the conference schedule and timing?

Excellent       Good      Fair      Poor

Q. 4 How would you rate the communication and information provided before, during, and after the Conference?

Excellent      Good      Fair      Poor

Q. 5 Did the conference meet your expectation?

Yes       Mostly      Somewhat      Not at all

Q. 6 Did the conference provide opportunities for learning new information and skills?

Yes       Mostly      Somewhat      Not at all

Q. 7 What could be improved for future conference?

*Keep some breaks between two hrs. lectures  
or program.*

*[Signature]*  
Signature

Note: Submit the feedback form at feedback desk.

# नवराष्ट्र

www.navarashtra.com

## भौतिकशास्त्र, गणितात तज्ज्ञांकडून विचारमंथन

125 पोस्टर्स केले प्रदर्शित : जवाहरलाल नेहरू महाविद्यालयात शैक्षणिक परिषद

वाडी, प्रतिनिधी. वाडी येथील जवाहरलाल नेहरू कला-वाणिज्य आणि विज्ञान महाविद्यालयात भौतिकशास्त्र आणि गणित विभागातर्फे राष्ट्रीय परिषद आयोजित करण्यात आली.

व्हीएसपीएम अकादमी ऑफ फायर एज्युकेशनचे संस्थापक भाऊसाहेब भोगे, रातुम नागपूर विद्यापीठाचे कुलगुरू डॉ. राजेंद्र काकडे, व्हीएसपीएम अकादमी ऑफ हायर एज्युकेशनचे सचिव युवराज चालखोर, महाविद्यालयाचे प्राचार्य डॉ. संजय टेकाडे यांच्या उपस्थितीत दीपप्रज्वलनाने 'इनोव्हेशन इन सायन्स अॅन्ड टेक्नॉलॉजी फॉर सिस्टीम डेव्हलपमेंट' विषयावरील राष्ट्रीय शैक्षणिक परिषदेचे उद्घाटन करण्यात आले.



परिषदेचे समन्वयक डॉ. गजानन झाडे यांनी परिषदेच्या आयोजनाचे उद्दिष्ट आणि महत्त्व प्रास्ताविकेतून स्पष्ट केले. याप्रसंगी सचिव डॉ. नागपुरे, आयक्यूएसी समन्वयक डॉ. धरड प्रामुख्याने उपस्थित होते. तीन तांत्रिक सत्रांतर्गत, पहिल्या तांत्रिक सत्रात मुंबई विद्यापीठाच्या भौतिकशास्त्र विभाग प्रमुख डॉ. वैशाली बोंबले यांनी नवीन तंत्रज्ञान-

2050 यावर व्याख्यान सादर केले. दुसऱ्या सत्रात, रातुम नागपूर विद्यापीठाच्या भौतिकशास्त्र विभागाचे वरिष्ठ संशोधक डॉ. संजय ढोबळे आणि तिसऱ्या सत्रात, गुरुग्राम विद्यापीठ, हरियाणा येथून आमंत्रित डॉ. विभा चोप्रा यांनी व्याख्यान सादर केले. या राष्ट्रीय परिषदेसाठी अनेक राज्यांच्या विद्यापीठांचे प्रतिनिधी उपस्थित होते.

## JNC में राष्ट्रीय शैक्षिक परिषद का आयोजन

### भौतिकशास्त्र व गणित के विशेषज्ञों के किया मंथन

■ वाडी (सं) जवाहरलाल नेहरू कला, वाणिज्य व विज्ञान महाविद्यालय वाडी में भौतिकशास्त्र व गणित विभाग की ओर से हाल ही में राष्ट्रीय परिषद का आयोजन किया गया था. इनोव्हेशन इन सायन्स एंड टेक्नोलॉजी फॉर सिस्टम डेव्हलपमेंट विषय पर आयोजित राष्ट्रीय परिषद का उद्घाटन व्हीएसपीएम एकेडमी ऑफ फायर एज्युकेशन के संस्थापक भाऊसाहब भोगे, राष्ट्रसंत तुकडोजी महाराज नागपुर विद्यापीठ के प्र कुलगुरु डॉ. राजेंद्र काकडे, व्हीएसपीएम एकेडमी ऑफ हायर एज्युकेशन के सचिव युवराज चालखोर, महाविद्यालय के प्राचार्य डॉक्टर संजय टेकाडे के हाथो व उपस्थिति में दीप प्रज्वलन कर संपन्न हुआ. परिषद के समन्वयक डॉ गजानन झाडे ने प्रस्तावना में परिषद आयोजन का उद्देश व महत्त्व बताया. सचिव डॉ. नागपुरे, आयक्यूएसी को-आर्डिनेटर डॉक्टर घारड मंच पर उपस्थित थे. मंच पर आसीन सभी



अतिथियों का महाविद्यालय की ओर से स्वागत सत्कार किया तथा स्मरणिका का भी भी विमोचन किया गया.

तीन तकनीकी सत्र अंतर्गत प्रथम टेक्निकल सत्र में मुंबई विद्यापीठ भौतिकशास्त्र विभाग प्रमुख डॉक्टर वैशाली बोंबले ने न्यू टेक्नॉलॉजी -2050 पर ,दूसरे सत्र में राष्ट्रसंत तुकडोजी महाराज नागपुर विद्यापीठ के भौतिकशास्त्र विभाग के वरिष्ठ संशोधक डॉ संजय ढोबले ने तथा तीसरे सत्र में गुरुग्राम विद्यापीठ हरियाणा से निर्मात्रित डॉ. विभा चोपडा ने व्याख्यान प्रस्तुत किया. इस राष्ट्रीय परिषद

हेतु अनेक राज्य के विद्यापीठो से प्रतिनिधि उपस्थित थे. विविध राज्य से सहभागियों ने विषय से संबंधित 125 पोस्टर प्रदर्शित किए. पोस्टर प्रदर्शन के मूल्यांकन हेतु रातुम नागपुर विद्यापीठ गणित विभाग प्रमुख डॉ. जी डी केदार चेअरमैन बोर्ड ऑफ स्टडीज इन फिजिक्स , नागपुर विद्यापीठ के डॉक्टर एस बी कोंडावार ने किया. बेस्ट पोस्टर प्रस्तुतिकरण हेतु अतिथियों के हाथो विजेताओ को पुरस्कार प्रदान किये गये . परिषद को सफल बनाने सभी प्राध्यापक, कर्मचारियों ने अथक प्रयास किये.

V. S. P. M. Academy of Higher Education, Nagpur  
Jawaharlal Nehru Arts, Commerce and Science College Wadi, Nagpur.  
National Conference on  
**Innovations in Science & Technology for Sustainable Development**  
**Full Research Papers received for publication**

S. N	Title of research paper	Authors
1	Cloud Computing and its Role in Revolutionizing Education under NEP-2020: Opportunities and Challenges	<b>M. R. Ramesh</b> Indira Gandhi Centre for Atomic Research, Kalpakkam-603102, Tamilnadu. Email id : <a href="mailto:gascramesh@gmail.com">gascramesh@gmail.com</a>
2	Material Synthesis and Characterization: A Pathway to Advanced Materials	<b>Prajakta Chandrashekhar Dukre</b> Nagpur College of Pharmacy, Wanadongri, Nagpur Email id : <a href="mailto:prajaktacd30@gmail.com">prajaktacd30@gmail.com</a>
3	Multiplicative Digital Root: Equivalent of Additive Digital Root	<b>Sudha Rani Dehri</b> <sup>1*</sup> , R. K. Agrawal <sup>2</sup> <sup>1</sup> Department of Mathematics, RTM Nagpur University, Nagpur, Maharashtra, India <sup>2</sup> Department of Mathematics, Hislop College, Nagpur, Maharashtra, India Email id : <a href="mailto:sdehri@yahoo.in">sdehri@yahoo.in</a>
4	ADVANCEMENTS OF STRATEGIES TO PERFORM SURGERY USING ELECTROSURGICAL UNIT	<b>S. S. Shende</b> <sup>1*</sup> , K. Y. Rokde <sup>2</sup> <sup>*1</sup> Department of Electronics, Sharadchandra Pawar Mahavidyalaya, Lonand, India <sup>2</sup> Department of Electronics, Dr. Ambedkar College, Nagpur, India. Email id : <a href="mailto:sagarshende2012@gmail.com">sagarshende2012@gmail.com</a>
5	AI-IoT Ecosystem in the Education Sector by Privacy Preservation	<b>Akanksha Verma</b> <sup>1*</sup> , Priyanka Mehta <sup>2</sup> , Ganesh Vandile <sup>3</sup> , Deoram Nandanwar <sup>3</sup> , Amar Nandanwar <sup>4</sup> <sup>1</sup> S. J. College, Naubasta Road, Kanpur-208021, Uttar Pradesh, India. <sup>2</sup> Dayanand Arya Kanya Mahavidyalaya, Jaripatka, Nagpur-440014, Maharashtra. <sup>3</sup> Shri Mathuradas Mohota College of Science, Nagpur-440009, Maharashtra, India. <sup>4</sup> J. M. Patel Arts, Commerce & Science College, Bhandara-441904, Maharashtra. Email id : <a href="mailto:akanksha15v@gmail.com">akanksha15v@gmail.com</a>
6	Tinospora cordifolia: A Natural and Sustainable anti-dandruff Innovation	Amita Somalwar <sup>*a1</sup> , <b>Vidhi Agrawala</b> <sup>2</sup> , Khushi Shrivastava <sup>3</sup> , Seema Somalwar <sup>a4</sup> <sup>a</sup> Department of Cosmetic Technology, Nikalas Mahila Mahavidyalaya, Nagpur. 440025, India. Email id : <a href="mailto:*amitasomalwar@gmail.com">*amitasomalwar@gmail.com</a> , <a href="mailto:vidhiagrawal.08.12@gmail.com">vidhiagrawal.08.12@gmail.com</a>
7	Review on Nanostructured Materials: A new era in Material Science	Arti M. Chaudhari <sup>1</sup> , <b>Bharti S. Anerao</b> <sup>2</sup> Arpana G. Wahane <sup>3</sup> , Aparna A.Chavan <sup>4</sup> <sup>1</sup> Department of Physics, Yeshwant Mahavidyalaya, Wardha 442001, India <sup>2</sup> Department of Physics, Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur 44001, India <sup>3,4</sup> Research Scholars, P. G. T. D. of Physics, R. T. M. Nagpur University, Nagpur 44001, India Email id : <a href="mailto:bhartianerao@gmail.com">bhartianerao@gmail.com</a>
8	AN OVERVIEW OF COMPUTATIONAL SOFTWARES AND MATHEMATICAL TOOLS	Manjusha V. Borkar <sup>1</sup> , <b>Priyanka P. Barde</b> <sup>2*</sup> Department of Mathematics, Kamla Nehru Mahavidyalaya, Nagpur Email id: <a href="mailto:priyankawadkar822@gmail.com">priyankawadkar822@gmail.com</a>
9	Sustainable Eco-Friendly Textile Dyeing: Extraction and Application of Natural Dye from Argemone mexicana Flowers on Fabric	<b>Bhawana K. Madavi</b> <sup>a*</sup> , Sunanda S. Aswale <sup>b</sup> , <sup>a</sup> Department of Chemistry, Shri M. M.College of Science, Nagpur. Gramgeeta Mahavidyalaya, Chimur, Chandrapur, Maharashtra- 442903 Email id : <a href="mailto:bkmadavi1996@gmail.com">bkmadavi1996@gmail.com</a>
10	Structural and optical properties of vacuum evaporated thin films of semiconducting Cadmium Sulphide coated on bare glass plates	<b>Laxmikant P. Damodare</b> Department of Physics, Hislop College, Civil Lines, Nagpur 440001, Maharashtra. Email id: <a href="mailto:drdamodare@gmail.com">drdamodare@gmail.com</a>
11	Vedic Mathematics:Technique, Applications and Efficiency Analysis	<b>Aishwarya Gawande</b> , Department of Mathematics, Jawaharlal Nehru College Wadi, Nagpur, India, 440023 Email id: <a href="mailto:aishwaryagawande315@gmail.com">aishwaryagawande315@gmail.com</a>
12	Analysis Of Ultrasonic Behavior Of Binary Liquid Mixture Containing Tetra Butyl Ammonium Iodide and xylene At Different Temperatures	<b>M. K. Binkar</b> <sup>*</sup> , R. B. Ramteke, J. N. Ramteke <i>Department of Physics,</i> <i>Shri Mathuradas Mohata College Of Science, Nagpur, Maharashtra, India</i> Email id: <a href="mailto:binkarmansukh91@gmail.com">binkarmansukh91@gmail.com</a>

13	White Matter and Gray Matter Changes in Schizophrenia: A Neuroanatomical Perspective	<b>M.R. Meshram*</b> , A.D.Sakhare, Atul R. Thaware Department of Electronics and Computer Science R.T.M.Nagpur University, Nagpur Email id: <a href="mailto:mihir25_2010@rediffmail.com">mihir25_2010@rediffmail.com</a>
14	Cloud Computing in Library Services	<b>Premlata P Kurhekar</b> Jawaharlal Nehru Arts Commerce & Science Wadi, Nagpur, India, 440023 Email id: <a href="mailto:premlatakurhekar@gmail.com">premlatakurhekar@gmail.com</a>
15	In Vitro Hemocompatibility Analysis of Magnesium Ferrite (MgFe <sub>2</sub> O <sub>4</sub> ) Nanoparticles for Biomedical Applications	Palash M. Thakre <sup>1</sup> , S. S. Wagh <sup>2</sup> and <b>Bhumi A. Mehere<sup>3*</sup></b> <sup>1,3</sup> Department of Biochemistry, Dr. Ambedkar College, Deekshabhoomi, Nagpur. <sup>2</sup> Department of Biochemistry, Kamla Nehru Mahavidyalaya, Nagpur- 440024 Email id : <a href="mailto:palashthakre21@gmail.com">palashthakre21@gmail.com</a> , <a href="mailto:bhumimehere@gmail.com">bhumimehere@gmail.com</a>
16	Ichthyofaunal Diversity of MadhuGanga Lake, Mohpa, Taluka Kalmeshwar, District Nagpur (M.S.).	<b>Priti M. Dattir<sup>1*</sup></b> , Dr. Manisha M. Bhatkulkar <sup>2</sup> Department of Zoology, R. T. M. Nagpur University, Nagpur <sup>2</sup> Department of Zoology, Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur Email id : <a href="mailto:pritydattir@gmail.com">pritydattir@gmail.com</a>
17	Phytochemical study of wild Hibiscus sabdariffa from Bhiwapur Tahsil of Nagpur District, (M.S.)	<b>Sachin B. Kubde<sup>1*</sup></b> , Smita G. Kore <sup>2</sup> , Dr. Nitin C. Kongre <sup>3</sup> <sup>1,2</sup> Department of Chemistry, R. T. M. Nagpur University, Nagpur, <sup>3</sup> Department of Chemistry, Jawaharlal Nehru Arts, com. & Science College Wadi, Nagpur, 440023, India. Email id : <a href="mailto:Sachin.kubde111@gmail.com">Sachin.kubde111@gmail.com</a>
18	Comparative Analysis of Iterative Methods for Solving Non-linear Equations: A Manual Computation	<b>Rupali R. Meshram<sup>1</sup></b> , Unnati R. Bhojar <sup>*</sup> Department of Mathematics, Kamla Nehru Mahavidyalaya, Nagpur, Maharashtra. Email id : <a href="mailto:rupa.meshram15@gmail.com">rupa.meshram15@gmail.com</a> , <a href="mailto:unnatibhojar24@gmail.com">unnatibhojar24@gmail.com</a>
19	Eco Enzymes from Fruit Peels Waste- A Sustainable Fermentation Approach	<b>Sejal Harde<sup>1*</sup></b> , Abhiruchi Durani <sup>2</sup> , Bharati Ganu <sup>3</sup> , Asmita Duragkar <sup>4</sup> , Prachi Lakhe <sup>5</sup> Department of Cosmetic Technology, Nikalas Mahila Mahavidyalaya, Pratap Nagar Rd. 440025 Email id : <a href="mailto:sejalharde8g@gmail.com">sejalharde8g@gmail.com</a>
20	The Structural and Optical Characterizations of Synthesized Ca <sub>2</sub> YSn <sub>2</sub> Al <sub>3</sub> O <sub>12</sub> :Tb <sup>3+</sup> Green-Colored Emitting Garnet Phosphor	<b>G. C. Vandile<sup>1*</sup></b> , D. V. Nandanwar <sup>1</sup> , A. K. Nandanwar <sup>2</sup> , B. P. Walde <sup>1</sup> , K. M. Nirgulkar <sup>1</sup> <sup>1</sup> Shri Mathuradas Mohota College of Science, Nagpur-440009, India. <sup>2</sup> J. M. Patel Arts, Commerce & Science College, Bhandara-441904, India. Email id : <a href="mailto:ganesh9326wandile@gmail.com">ganesh9326wandile@gmail.com</a>
21	Structural Comparison of Ferrites Synthesized via Two Different Methods and Their Adsorption Analysis	<b>Ashvini V Meshram<sup>a*</sup></b> , Indrani B Das Sarma <sup>b</sup> , Kishor M Hatzade <sup>a</sup> , Nitesh D Shambharkar <sup>c</sup> <sup>a</sup> Department of Chemistry, Dhote Bandhu Science College, Gondia 441614, India <sup>b</sup> Department of Applied Science and Humanities, Jhulelal Institute of Technology, Nagpur 441111, India <sup>c</sup> Vidya Vikas Atrs Commerce and Science College, Samudrapur Email id : <a href="mailto:ashvinim20@gmail.com">ashvinim20@gmail.com</a>
22	Adsorption kinetics of electrospun nickel cobaltite/polyaniline composite nanofibers-based ammonia gas sensor	<b>Nayana D. Sonwane</b> J. M. Patel Art's, Commerce & Science College, Bhandara - 441904, India Email id : <a href="mailto:nayana.sonwane@gmail.com">nayana.sonwane@gmail.com</a>
23	Sustainable Drainage Management for Fisheries: A Pathway to Ecological Balance and Productivity	<b>J. S. Dahegaonkar</b> Department of Zoology, Sevadal Mahila Mahavidyalaya Nagpur, 440024, India Email id : <a href="mailto:savidahegaonkar2907@gmail.com">savidahegaonkar2907@gmail.com</a>
24	Photoluminescence Properties Of multi Wavelength Excited Eu <sup>3+</sup> Activated Ca <sub>5</sub> (PO <sub>4</sub> ) <sub>3</sub> F Phosphors Prepared Via Sol-Gel Method	<b>Kalpna M. Sonkusare<sup>a*</sup></b> , Yatish R. Parauha, Deepak R. Taikar <sup>b</sup> S. J. Dhoble <sup>a</sup> Department of Physics, R.T.M. Nagpur University, Nagpur, 440033, India <sup>b</sup> Shri Lemdeo Patil Mahavidhyalaya Mandhal, The-Kuhi, Dist-Nagpur, 440001, India Email id : <a href="mailto:kalpanasonkusare0306@gmail.com">kalpanasonkusare0306@gmail.com</a>
25	Study and Interpretation of the Physico-Chemical Characteristics of Groundwater with Special Focus on Nitrate	<b>Ashwini Shiledar<sup>1*</sup></b> , Vaishali Meshram <sup>2</sup> , Dipti Iyer <sup>3</sup> <sup>1</sup> Department of Chemistry, PGTD RTMNU, Nagpur, Maharashtra, India. <sup>2</sup> Dharampeth M. P. Deo Memorial Science College, Nagpur, Maharashtra, India. <sup>3</sup> Department of Chemistry, PGTD, RTMNU, Nagpur, Maharashtra, India. Email id : <a href="mailto:ashungp2012@gmail.com">ashungp2012@gmail.com</a>
26	Effect of foreign particle on binding interaction of 2CA4MBA with BSA: Equilibrium dialysis study	<b>Shrikant B. Thakare</b> Department of Chemistry, Arvindbabu Deshmukh Mahavidyalaya, Bharsingi, Tah. Narkhed, Dist. Nagpur Email id : <a href="mailto:shrikantthakare3@gmail.com">shrikantthakare3@gmail.com</a> .

27	"Synthesis and Characterization of Na <sub>3</sub> V <sub>2</sub> (PO) <sub>4</sub> as a Cathode Material for Sodium Ion Battery"	<b>Pranali M. Kamatwar<sup>a,b*</sup></b> , Vaibhav A. Bhagat <sup>a</sup> , Umesh A. Palikundwar <sup>a*</sup> <sup>a</sup> X-ray Research Laboratory, Department of Physics, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur-440033, India <sup>b</sup> J. N. Arts, Commerce & Science College, Wadi, Nagpur, 440023, India. Email id : <a href="mailto:kamatwarpranali25@gmail.com">kamatwarpranali25@gmail.com</a>
28	"Survey of Post-COVID-19 syndrome faced by COVID-19 Survivors"	<b>Mankar Shilpa<sup>1*</sup></b> , Sanjivini Kamale. <sup>1</sup> Department of Microbiology, Dr. R. G. Bhojar Arts, Commerce & Science College, Seloo. District- Wardha (Maharashtra) Email id : <a href="mailto:gawandeshilpa3@gmail.com">gawandeshilpa3@gmail.com</a>
29	MILK PRODECER CONTRIBUTION IN RURAL AND ECONOMIC DEVELOPMENT IN INDIA	<b>Rahul Doifode<sup>*</sup></b> , Sanjay S. Tekade Jawaharlal Nehru Arts, commerce & Science College Wadi, Nagpur, 440023, India Email id : <a href="mailto:rahuldoifode144@gmail.com">rahuldoifode144@gmail.com</a>
30	MANAGEMENT OF WATER BODIES IN WARDHA DISTRICT, MAHARASHTRA	<b>Ankita A. Thakare<sup>1*</sup></b> , Nayana S Shirbhate <sup>2</sup> Department of Botany, Vidya Vikas Arts, Commerce & Science College, Samudrapur Dist- Wardha 442305, India Email id : <a href="mailto:thakareankita07@gmail.com">thakareankita07@gmail.com</a>
31	ARTIFICIAL LIGHTING STRATEGIES FOR SUSTAINABLE CULTIVATION OF MEDICINAL PLANTS: A FOCUS ON <i>CORIANDRUM SATIVUM</i> AND <i>CASSIA TORA</i>	<b>Pratiksha R. Tayde<sup>1*</sup></b> , Nayana S. Shirbhate <sup>2</sup> Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur Dist. Wardha – 442305. Email id : <a href="mailto:pratikshartayde30@gmail.com">pratikshartayde30@gmail.com</a>
32	Green Synthesis and Characterization of Silver Nanoparticles Using <i>Cinnamomum tamala</i> Leaf Extract and its antimicrobial activities.	<b>Vaibhav D. Kalambe<sup>*</sup></b> , Manohar S. Ambatkar Department of Zoology, Vidya Vikas Arts, Commerce and Science College, Samudrapur Dist. Wardha – 442305 Email id : <a href="mailto:vaibhavkalambe80@gmail.com">vaibhavkalambe80@gmail.com</a>
33	Adsorption isotherm studies of dye removal kinetics by using acid doped polyanilines as relative adsorbents	<b>A.N. Ingole<sup>1*</sup></b> , N. C. Kongre <sup>2</sup> , P.R. Bonde <sup>3</sup> , J.N. Thakare <sup>4</sup> <sup>1,2</sup> Jawaharlal Nehru Arts, Com. & Science College, Wadi, Nagpur - 440023 (MS) India. <sup>3</sup> Indira Mahavidyalaya, kalam, Yawatmal - 445401 (MS) India. <sup>4</sup> St. Vincent Palloti College of Engineering & Technology, Nagpur - 440018 (MS) India. Email id : <a href="mailto:avinashingolechem@gmail.com">avinashingolechem@gmail.com</a>

*MOU for research papers publication in a Journal*



VSPM Academy of Higher Education Nagpur's

**Jawaharlal Nehru Arts, Commerce and Science**

**College, Wadi, Nagpur- 440023 (M.S.)**

(Affiliated to RTM Nagpur University, Nagpur)

Website: [www.jncwadi.ac.in](http://www.jncwadi.ac.in)

E-mail: [jnc.wadi@rediffmail.com](mailto:jnc.wadi@rediffmail.com)

Phone: (07104) 220963



**Memorandum of Understanding**

Between

**Jawaharlal Nehru Arts, Commerce & Science College Wadi, Nagpur, Maharashtra, India 440023**

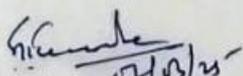
&

**INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS [ [www.IJRAR.org](http://www.IJRAR.org) ]**

Jawaharlal Nehru Arts, Commerce & Science College Wadi, Nagpur, Maharashtra, India 440023, and **INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS** hereby agreed for Memorandum of Understanding with following points:

1. The selected research papers review and Plagiarism checking for the **National Conference on Innovation in Science & Technology for Sustainable development [ISTSD-2025]** organised by **Jawaharlal Nehru Arts, Commerce & Science College Wadi, Nagpur, Maharashtra, India** will be published in the Special Issue of IJRAR. The National conference was scheduled on 22<sup>nd</sup> February 2025.
2. The sole right of selection for paper will lie with Your College name.
3. The selection of papers, Review and Plagiarism checking will be done by Your College name. Your College name will send selected papers to IJRAR.
4. The Your College name will submit paper to <https://IJRAR.org/submitpaper.php> and soft copy of the paper (word format as per IJRAR format) to IJRAR.
5. The IJRAR will charge online maintenance fee as Rs 500/- per paper.
6. The IJRAR will provide ISSN to the special issue and Publish paper.
7. The IJRAR will provide DOI for special issue without any extra charges.
8. After sending all Paper Your College name will complete all payment due before publication.
9. After payment paper will publish and available online provide DOI, certificate and indexing.

**MoU signed by**

  
Principal

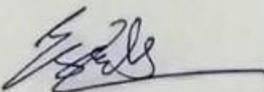
(Dr. S. S. Tekade)  
Principal

Jawaharlal Nehru Arts, Comm. & Sci  
College, Wadi Nagpur

(Stamp and Sign)

Date: 07/03/2025

Place: Wadi, Nagpur

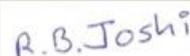


Convener, [ISTSD-2025]

(Dr. G. D. Zade)  
**Dr. G. D. Zade**  
Incharge

Faculty of Science  
J. N. Arts. Com. & Sci. College  
Wadi Nagpur-23

(Stamp and Sign)



IJRAR Editor







**INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS  
[IJRAR]**

[Scholarly open access journal, Peer-reviewed, and Refereed Journals](#)

[Impact factor 7.17 \(Calculate by Google scholar and Semantic Scholar\)](#)

**( [ISSN Approved Journal](#) )**

1. The selected research papers review and Plagiarism checking for the National Conference on ***Innovations in Science & Technology for sustainable development*** organized by ***Jawaharlal Nehru Arts, Commerce & science College Wadi, Nagpur, Maharashtra, India, 44023*** on ***22<sup>nd</sup> February 2025*** will be published in the Special Issue of IJRAR.
2. The sole right of selection for paper will lie with Your College name.
3. The selection of papers, Review and Plagiarism checking will be done by Your College name. Your College name will send selected papers to IJRAR.
4. The IJRAR will provide ISSN to the special issue and Publish paper.
5. The IJRAR will provide DOI for special issue without any extra charges.
6. After sending all Paper Your College name will complete all payment due before publication.
7. After payment paper will publish and available online provide DOI, certificate and indexing.

-----

*One of the participant's research paper published in an International Journal*

Certificate of Publication



## INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS (IJRAR) | IJRAR.ORG

*An International Open Access, Peer-reviewed, Refereed Journal*

E-ISSN: 2348-1269, P-ISSN: 2349-5138

IJRAR | E-ISSN: 2348-1269, P-ISSN: 2349-5138

The Board of  
International Journal of Research and Analytical Reviews (IJRAR)  
Is hereby awarding this certificate to  
**M R RAMESH**  
In recognition of the publication of the paper entitled  
**Cloud Computing and its Role in Revolutionizing Education under NEP-2020: Opportunities and Challenges**

Published In IJRAR ( www.ijrar.org ) UGC Approved - Journal No : 43602 & 7.17 Impact Factor  
Volume 12 Issue 1 March 2025, Date of Publication: 10-March-2025

PAPER ID : IJRAR25A2735  
Registration ID : 307779



*R.B. Joshi*  
EDITOR IN CHIEF

UGC and ISSN Approved - Scholarly open access journals, Peer-reviewed, and Refereed Journals, Impact factor 7.17 (Calculate by google scholar and Semantic Scholar | AI-Powered Research Tool) , Multidisciplinary, Monthly Journal

**INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS | IJRAR**  
*An International Scholarly, Open Access, Multi-disciplinary, Indexed Journal*

**Website: [www.ijrar.org](http://www.ijrar.org) | Email: [editor@ijrar.org](mailto:editor@ijrar.org) | ESTD: 2014**  
Manage By: IJPUBLICATION Website: [www.ijrar.org](http://www.ijrar.org) | Email ID: [editor@ijrar.org](mailto:editor@ijrar.org)



# Cloud Computing and its Role in Revolutionizing Education under NEP-2020: Opportunities and Challenges

**M R RAMESH**, Indira Gandhi Centre for Atomic Research, Kalpakkam-603102, Tamilnadu

## Abstract:

The National Education Policy (NEP) 2020 outlines a transformative vision for the Indian education system, aiming to integrate technology to enhance access, equity, and quality in education. One of the key technological tools recognized in this vision is cloud computing, which is poised to revolutionize teaching and learning across the country. This paper explores the role of cloud computing in the context of NEP-2020, focusing on its potential to bridge educational gaps, foster innovation, and enable personalized learning experiences.

Cloud computing offers scalable, flexible, and cost-effective solutions for educational institutions, making it possible to access digital learning resources, collaborate in real-time, and manage academic content remotely. Through its application, schools and universities can expand access to educational materials, facilitate online classes, and enhance administrative processes, which are critical in the post-pandemic era of education. The NEP-2020 advocates for the creation of digital platforms to empower students and educators, and cloud computing serves as the backbone of such platforms, enabling efficient data storage, seamless content delivery, and improved communication.

However, the integration of cloud computing also presents challenges, including digital literacy, cybersecurity concerns, and infrastructure limitations in rural areas. This paper critically examines these barriers and suggests strategies for overcoming them, such as increased government investment in digital infrastructure, teacher training programs, and the development of secure cloud-based platforms.

In conclusion, cloud computing is a vital enabler for the successful implementation of NEP-2020's vision of a technology-driven educational ecosystem. By addressing the challenges and harnessing its full potential, cloud computing can facilitate the transition toward a more inclusive, flexible, and modernized education system in India.