

## Programme Schedule 20.12.2025

9.30AM.....10.00AM.....Registration  
10AM.....11.30AM.....Inaugural Session  
11.30AM.....11.45AM.....Tea Break  
11.45AM.....1.30PM.....Technical Session-I  
1.30PM.....2.15PM.....Lunch-Break  
2.15PM.....4.30PM.....Technical Session-II  
4.30PM.....5.00PM.....Interaction  
5.00PM.....5.30PM.....Tea Break  
5.30PM.....Cultural program  
Session to Continues.....

## Programme Schedule 21.12.2025

9.30AM.....11.30AM.....Technical Session-III  
11.30AM.....11.45AM.....Tea Break  
11.45AM.....1.15PM.....Technical Session-IV  
1.15PM.....2.15PM.....Lunch-Break  
2.15PM.....3.15PM.....Panel discussion  
3.15PM.....5.00PM.....Valedictory Function

## ACCOMMODATION

Delegates desirous of accommodation facility are requested to contact the convener over Mobile No.9937757389, 6370403064 .

## CONTACTS

Capt.(Dr.) Kishor Kumar Prusty  
H.O.D. Mathematics  
Convener  
Hindol College, Khajuriakata,  
Dhenkanal, Odisha, 759020  
Mob – 6370403064,9937757389  
Email:kishorprusty2011@gmail.com

## CALL FOR PAPER.

Participants intending to present papers in the Seminar should submit abstract by 30<sup>th</sup> November 2025. It may be submitted in soft copy to the email: kishorprusty2011@gmail.com It will be reflected in the souvenir publish by the Dept.

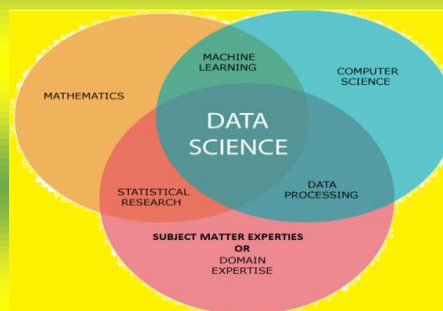


PM-USHA,Bhubaneswar  
SPONSORED

National Seminar

On

APPLICATION OF MATHEMATICS IN DATA SCIENCE



On

20th & 21st Dec 2025



Organised by

Dept. of Mathematics  
Hindol College, Khajuriakata  
Dhenkanal, Odisha



In collaboration with

Odisha Mathematical Society, Odisha

## Invited Dignitaries

Prof. Sudarsan Padhy

Ex-Director , IMA, Bhubaneswar

Prof. Trilochan Biswal

President Odisha Mathematical Society

Prof. Jasobanta Jena

Director, Institute of Mathematics & Application

Prof. C . Nahak

IIT Kharagpur

Prof. N.K. Choudhury

Ex-President, OMS, Bhubaneswar

Prof.Smruti Mohanty

Ex-Prof., IGIT Saranga

Prof.S.R. Mishra

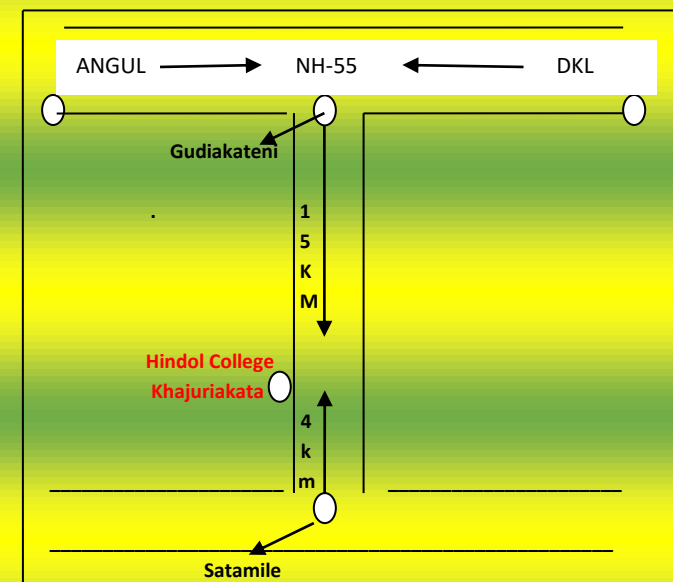
S-O-A University (ITER), Bhubaneswar

Prof. J.P. Panda

VSSUT, Burla, Sambalpur

Prof. Bishnu Charan Rout

Sarala Birla University, Ranchi



## Invitation

Esteemed Sir/Madam,

Department of Mathematics, Hindol College, Khajuriakata, Hindol, Dhenkanal, Odisha Cordially invites you to the National Seminar on **“APPLICATION OF MATHEMATICS IN DATA SCIENCE”** to be held on 20<sup>th</sup> and 21<sup>st</sup> December 2025 in the College premises. We solicit your gracious presence on the occasion.

Dr. K.K. Prusty (Convenor&H.O.D)	Mr. D. K. Garnaik (PM-USHA Nodal Officer)	Mr. P.K. Dhal (Principal)
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## ABOUT COLLEGE

Hindol College, Khajuriakata is an old college of the state provides education in Arts and Science streams. Established in the year 1977 by an organised group of dedicated Soul of the area, the college has achieved a remarkable growth within 39 years and has attained the credibility of being the torch bearer of academic excellence. It is 120kms. away from the State capital, Bhubaneswar, situated in Hindol Sub-division of Dhenkanal district in the back ground of rural panoramic beauty. After getting the affiliation from UGC in 2006 under 2(F) and 12(B), the academic activities have been accelerated under the able guidance of highly experienced and qualified teachers which envisage a bright future of our institution. The College is accredited by NAAC(B++) from the academic session 2022-23

## ABOUT SEMINAR

Mathematics is the foundation of data science, providing the tools for understanding, analyzing, and modeling data to derive insights and make predictions. Key areas include linear algebra for handling data in matrices and vectors, probability and statistics for analyzing uncertainty and drawing inferences, and calculus for optimizing algorithms like gradient descent.

### Key roles of mathematics in data science:

- **Algorithm development:** Mathematics provides the theoretical framework for algorithms used in data science.
- **Linear Algebra:** Used to represent data as vectors and matrices, which is fundamental for many machine learning algorithms, including deep learning models.
- **Calculus:** Essential for optimization, such as using gradient descent to find the minimum of a function, which is a core part of training machine learning models.
- **Data analysis and interpretation:** Mathematics helps in understanding and summarizing large datasets.

- **Probability and Statistics:** Used to quantify uncertainty, model the likelihood of events, summarize data (like finding the mean and variance), and make predictions based on samples.
- **Model building and prediction:** Mathematics is crucial for building models that can find patterns and make forecasts.
- **Optimization:** Techniques are used to train models and tune parameters to improve performance by minimizing errors.
- **Singular Value Decomposition (SVD):** A technique from linear algebra used to reduce the dimensionality of data and gain insights.
- **Understanding complexity:** Mathematical principles help in understanding the computational complexity of algorithms and designing efficient solutions.

## ABOUT ODISHA MATHEMATICAL SOCIETY :

The Odisha Mathematical Society (OMS) is an organization that promotes mathematics in the state, founded in auspicious day of Ganesh Chaturthi 11<sup>th</sup> sept. 1972. It is actively involved in modernizing the school mathematics curriculum and publishing books in the local vernacular. The society publishes the Journal of The Orissa Mathematical Society (JOMS), which features research articles in pure and applied mathematics, statistics, and computer science. The society also organizes events like annual conferences and training camps for mathematics Olympiads.

### AIMS & OBJECTIVES OF OMS :

- To promote and inculcate research in Mathematics;
- To render suggestions for curriculum reforms in Mathematics from school level to university level;
- To organize annual conferences and symposia;
- To publish journal periodically on research and teaching of mathematics;
- To publish a bilingual periodical in Oriya and English language to popularize the subject;
- To encourage and discover talents in mathematics and award prizes and certificates;
- To felicitate persons having outstanding contributions for research and teaching in mathematics;

## Local Organising Committee

Mr. P.K. Dhal,(Principal)  
Mr. A.K. Patra,(H.O.D. English)  
Mr. D. K. Garnaik,(PM-USHA Co-coordinator)  
Mr. J.N. Pati (I.Q.A.C. Co-Ordinator)

## Members

Mr. S.K. Pati (H.O.D.,Chem.)  
Mr. N.C. Panigrahi (H.O.D.,Pol.Sc.)  
Mr. S.S. Das (H.O.D.,Zoology)  
Dr. M.K. Swain ( H.O.D.,History )  
Mrs. S.L. Dash ( H.O.D., Botany )  
Mrs. S. Behera (H.O.D., Sanskrit)

## National Advising Committee

Prof. Trilochan Biswal  
President Odisha Mathematical Society  
Prof. N.K. Choudhury  
Ex-President,OMS,Bhubaneswar  
Prof. C . Nahak  
IIT Kharagpur  
Prof. N.C. Mohapatra  
Ex-Reader , Panchayat College,Boudh  
Prof. J.P. Panda  
VSSUT,Burla,Sambalpur

