



**Department of Mathematics
Pattamundai College
Pattamundai, Kendrapara
Odisha**

In Collaboration with

**Department of Mathematics
Kendrapara Autonomous College, Kendrapara, Odisha**

Invites you to a

State Level Seminar

On

Stochastic Process & Complex Dynamics

Date.03.02.2024

Venue:-Auditorium Hall

PATTAMUNDAI COLLEGE

PATTAMUNDAI, KENDRAPARA

ABOUT THE COLLEGE

The genesis of Pattamundai College dates back to the sixties of the last century when its foundation was laid on 1st June, 1967, though it started functioning since 5th July of 1970. This locality, a breadbasket of the district, turned proverbially backward both socially and economically as it became the continual haunt of natural calamities like cyclone, flood and drought, as it is even now, and there was no scope at all for higher education, the obvious catalyst for socio-economic transformation. The only college at Kendrapara, some 20 kms away and logistically disadvantageous for access then, had limited scope to cater to the academic need of the aspiring young college-goers of this vast locality. At this crucial juncture, a team of education lovers and activists starting with some college students of this land in Cuttack city, to the local activists and enthusiasts from the social gentry, came forward for establishment of a college for the benefit of all concerned. Launched as an Arts college with only 128 students, it has grown to its present premier position with two other streams of science and commerce and 1475 students on its rolls with 15 programs at UG level. With an eventful history of 50 years and a picturesque sprawling campus of 14.6 acres, it is indeed a testimony to the dream and sacrifice of our predecessors. Its alumni, globally positioned today are its identity markers and this institution has been playing a pivotal role in development of its satellite localities. Affiliated permanently to Utkal University, this college has been listed under 2(f) and 12 B of the UGC Act vouchsafing its academic standard and administrative acumen. The addition of new buildings, hostels, library, laboratories and playground over the years has not only given a new dimension to its infrastructure but also has facilitated the expansion of curricular and extra-curricular horizons. Quite ahead of its contemporaries, it has adopted new technology of ICT facilities, library automation, Wi-Fi campus, online classes, green initiatives, etc. by adopting the modern change to meet the expectation of its stakeholders.

VISION

Vision of the College To make higher education qualitative and value based for the socio-economic transformation of the nation. To instill a sense of discipline and morality among the student's community for the making the students socially responsible citizens.

MISSION OF THE COLLEGE

To grow into an institution of excellence and exemplary at the university level To provide literary, scientific, professional and technical education to the aspiring rural youth at a minimum cost. To be recognized as an institution with proven capacity to provide quality education in Science, Commerce & Arts; Humanities. To create symbiotic relationship with the society to meet the changing needs to introduce self-financing courses in multidisciplinary area. To adopt continues measures to improve the quality of the programme. To provide need-based career-oriented courses to the needs of the society to involve the Alumni for all round development of the college.

GENESIS OF THE DEPARTMENT

Pattamundai College, Pattamundai is a leading Degree College in the State imparting education in Arts, Science & Commerce Stream at Degree level . The college has successfully completed 53 years of its existence producing many bright scholars in different field. The Department of Mathematics also has a bright academic record since its inception .The department is constantly maintaining a 95% result in the examination conducted by Utkal University. The department annually conduct student seminar, extramural seminar, State level seminar, National Mathematics Day, Mentor-Mentee Progarmme, Add-on-Courses ,Field visit to eminent institutions etc. The department has conducted UGC sponsored State level seminar “Fuzzy logic & Fuzzy Sets” (2008), “Bio-Mathematics: An Analysis”(2009),National Level Seminar “Discrete Mathematics & Its Applications” (2012),State level seminar “Algebraic System & Its Application” (2019) , earlier. Many of the students of the department have secured important position pursuing career in Mathematics, which is available in the webpage of the institution www.pattamundaicollege.ac.in /Alumni Registration. The student of this department has excelled in different competition at college and inter college level. The faculties of this department are constantly updating their knowledge by joining national seminar ,workshop , refresher course, FDP, short term course organised by primer educational institution of India. The department is well equipped with modern ICT facilities like LCD Projector, Computer Lab, Laptops etc for benefit of the students. Till date Prof Babaji Charan Routroy, Prof Ranjan Kumar Dash has served the department for a long time. Currently Prof Arabinda Pandab is heading the department with other faculty member Dr Nirmala Kumar Sahoo.

ABOUT THE PROGRAMME THEME & OBJECTIVES

A stochastic process, also known as a random process, is a collection of random variables that are indexed by some mathematical set. Each probability and random process are uniquely associated with an element in the set. The index set is the set used to index the random variables. The index set was traditionally a subset of the real line, such as the natural numbers, which provided the index set with time interpretation. Stochastic Process Meaning is one that has a system for which there are observations at certain times, and that the outcome, that is, the observed value at each time is a random variable. Each random variable in the collection of the values is taken from the same mathematical space, known as the state space. This state-space could be the integers, the real line, or n -dimensional Euclidean space, for example. A stochastic process's increment is the amount that a stochastic process changes between two index values, which are frequently interpreted as two points in time. Because of its randomness, a stochastic process can have many outcomes, and a single outcome of a stochastic process is known as, among other things, a sample function or realization. In the current seminar the Resource person will introduce some concepts of Probability theory explained through examples. Then they will introduce Stochastic Processes with motivation. Finally they will discuss various types of Stochastic Processes and their Application.

Complex dynamics is a very active area of the field of dynamical system. An introductory discussion on the subject focusing on dynamics of complex quadratic polynomials . This family of examples will be studied using a variety of tools coming from classical and modern techniques in complex analysis ,topology , geometry and dynamical systems. The seminar will help to understand the local behavior of holomorphic transformations in one complex variable and also the global behavior of holomorphic maps focusing complex quadratic polynomials. These exhibit

dynamically important concepts like chaotic behavior, space of quadratic polynomials and the mandel brot set. In the seminar some examples of structural stability, structural instability and re normalization behavior may be discussed depending on the time frame. The study of iteration of analytic functions is known as Complex Dynamics. The active area of research shall be introduced to the participants. The talk will be supposed to be elementary and accessible to undergraduate students . All the ideas are to be explained through exponential map.

CALL FOR PAPER & GUIDE LINES

Research Papers/Papers are invited in the form of original works from the researchers, teachers, research scholars, social workers and students. Two hard copies and one soft copy (CD) of full paper are to be submitted. Medium of research paper can be in English only in MS-word (Times Roman font size 12.5 having 1.5 spacings). Authors are requested to follow strictly the specification given below without which it would be very difficult for the selection of papers for publication. Submission of Abstracts and the research paper should be submitted with the following information and in this order

- Title of Abstract
- Name & Designation of Authors(s)
- Institutional affiliation
- E-mail address
- Mob- Number
- Body of Abstract
- Key Words alphabetically.

The abstract should not exceed three hundred words (300 Words) and a full paper not more than three thousand words (3000 words).

Authors are requested to kindly send the abstracts and full papers through E-mail Id.

ACCOMMODATION

For free accommodation of out station participants ,Rooms will be provided at Hostels & Guest Houses with prior Intimation to Dr Nirmala Kumar Sahoo, Mob: 8917647154, E-mail Id:nirmalakumarsahoo@gmail.com

CHIEF PATRON

Prof. Dillip Kumar Bhuyan, Principal

ADVISORY COMMITTEE

1. Dr Ramesh Kumar Sahoo, HOD, Physics
2. Dr Dushasan Parida, HOD, Chemistry
3. Dr Anjali Kumari Dash, HOD, Botany
4. Dr. Sunil Kumar Pradhan, IQAC Coordinator, Pattamundai College
5. Dr. Fakir Chandra Pradhan, Coordinator Add-On-Courses, Pattamundai College

6. Prof Ashok Kumar Mishra, Reader and Head of the Department, Kendrapara Autonomous College, Kendrapara.
7. Prof Sarbeswatr Sahoo, Administrative Bursar.
8. Dr Premalata Rout, Academic Bursar
9. Capt Manoj Parida, HOD ,Sociology
10. Prof Sarojini Mishra,HOD,Zoology

ORGANISINIG COMMITTEE

1. Sri Arabinda Pandab(Convenor)
2. Dr Nirmala Kumar Sahoo (Co-ordinator)
3. Prof Ranjit Kumar Senapati, Reader in Sociology
4. Prof Srimanta Kumar Jena, HOD,Philosophy
5. Prof Ranjan Kumar Gahan, Lecturer in Chemistry
6. Prof Subhasis Mishra, IQAC, Member
7. Prof Jitendra Malik, IQAC, Member
8. Prof Ranjan Kumar Behura, HOD,History
9. Prof Ranjan Kumar Behera, HOD, Commerce
10. Prof Saroj Kumar Nayak, Lecturer in English

INVITED SPAEKERS

1. Dr Tarakanta Nayak, Associate Professor, IIT , Bhubanerswar



2. Dr Akash Ashirbad Panda, Assistant Professor, IIT, Bhubaneswar



Invitation

Sir/Madam,

It gives us immense pleasure to inform you that the Department of Mathematics, Pattamundai College, Pattamundai, Kendrapara, is going to organise a state level seminar in history on “**Stochastic Process & Complex Dynamics**” on **03rd February, 2024** in the Auditorium Hall of the College.

So, we would like to invite you to participate and contribute research papers in this seminar.

Your presence and participation will make the occasion more meaningful and successful

With Warm Regards.

Coordinator

Dr Nirmala Kumar Sahoo
Lecturer in Mathematics

Convener

Sri Arabinda Pandab
HOD, Mathematics

Chief Patron /Principal

Prof. Dillip Kumar Bhuyan
Principal

You May Reach Out

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