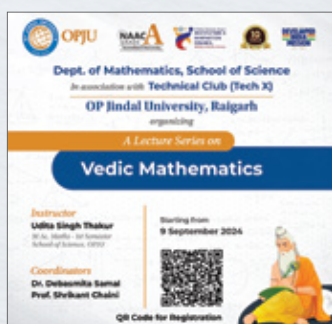# OPJU NEWSLETTER

OP Jindal University, Raigarh

(A) Events and Activities

1 The Department of Biotechnology, School of Science, in association with the Microbiologist Society of India (MBSI) student Chapter, organised a National Rangoli competition themed *Morphology of Microorganisms* on September 6, 2024. The event was coordinated by **Dr. Taniya Sengupta Rathore** and **Mr. Hemant Kumar**.

2 The Department of Mathematics, School of Science, in collaboration with the Technical Club (**Tech X**), organized a lecture series on *Vedic Mathematics* starting on September 9, 2024. The event was coordinated by **Dr. Debasmita Samal** and **Prof. Srikant Chaini**.

3 The School of Science, in collaboration with NSS, OPJU, organized an Expert Talk on *Opportunities for Higher Education Abroad* on September 13, 2024. **Dr. R. S. Singh** from the Department of Physics delivered the talk as the Resource Person, and **Dr. Dipti Shukla** coordinated the event.

4 Literary Club (Upasana), School of Science, organized a competition on *Tell Your Story (Story Telling/Narrating a real-life Incident)* on 13 September 2024. **Dr. Arindam Patra** coordinated the event.

5 The Department of Computer Science & Engineering, SoE, successfully conducted the Internal Hackathon for the *Smart India Hackathon (SIH)* 2024 on September 9, 2024.

6 **Dr. Shesadev Nayak, Mr. Rajneesh Tiwari,** and **Mr. Rahul Pandey** from CDC conducted sessions on *Impression Management, Saving Money – Best Investment Practices, Industry Expectations, Team Building and Leadership, and Excel Basics and Formulas* during a five-day workshop titled *Skills to Pay the Bills* from September 9 to 13, organized by the Academic Staff College for the non-teaching staff of OPJU.
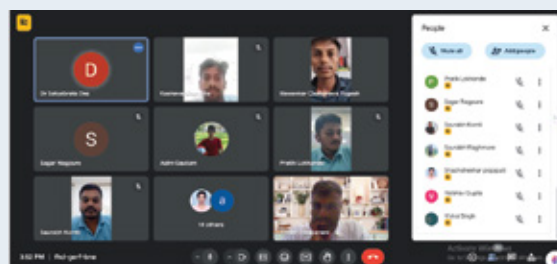

7 **Mr. Soumitra Tiwari** from CDC delivered a one-day training program on *Campus to Corporate* for GETs of Jindal Steel & Power, Angul, on September 20, 2024.

8 **Dr. Ravindra Singh Saluja** from the Department of Mechanical Engineering, SoE, delivered a one-day training program on *Project Management* for the GETs at JSP Angul on September 24, 2024. During the training, he shared key concepts on planning, execution, risk management, and project management techniques.

9 **Dr. Saroj Kumar** from the Department of Mechanical Engineering, **Dr. Guru Prakash** from the Department of Metallurgical Engineering, **Prof. Pushpanjali Hota** from the Department of Electrical Engineering, **Dr. Bhupesh Dewangan** from the Department of Computer Science and Engineering, and **Prof. Vinod Nagpure** from the Department of Civil Engineering were deputed to Jindal Steel and Power, Raigarh, and the Steel Structural Division (SSD) Punjipathra for 30 days under the *Faculty-Industry Interaction* program in September 2 to 30, 2024.

10 The Department of Metallurgical Engineering, SoE, organized an *Alumni Talk* on September 17, 2024, featuring alumni speakers **Mr. Chaitanya Bawankar, Mr. Allakeshawardhan, Mr. Sourab Komti, Mr. Amu**, and **Mr. Prathik Raju** from Unominda. They provided technical information, clarified queries for the current 2025 Batch students, and guided them on how to get selected in the drive. **Dr. Trinath Talapaneni** and **Dr. Satyabrata Das** from the department also motivated the students and offered technical inputs and tips for the PI round.

11 The Department of Mechanical Engineering, School of Engineering organized industrial visits to the Dongama-hua Captive Thermal Power Plant (4x135 MW) for Diploma, B.Tech, and M.Tech students from September 4 to 6, 2024. The main goal of these visits was to give students practical exposure to power plant operations and deepen their understanding of industrial processes.

12 The Department of Mechanical Engineering, SoE celebrated *Engineers' Day* in hounor of Sir Mokshagundum Visveswarayya's birth anniversary on September 17, 2024. The event recognized the significant contributions of the engineering community to human progress and national development. The campus was abuzz with excitement as three engaging events were held: Maze Solving, a General Quiz, and a CAD Modelling Competition.

13 **Dr. Mithilesh Kumar Sahu** from the Department of Mechanical Engineering, SoE, delivered an expert lecture on *Boiler Design Aspects and Combustion Theory to PGDPPT* students at JIPT on September 2, 2024. Additionally, he participated in a two-day workshop on *Multiple Entry/Exit* and the *Indian Knowledge System* at IIT Bhilai on September 13 and 14, 2024.

14 The Department of Mechanical Engineering on September 17, 2024, at OPJU, Raigarh, celebrated the *Vishwakarma Puja Utsav* in the Central Workshop and CoEMA. Faculty and staff members actively participated in the festivities. The puja honored and celebrated the contributions of craftsmen, artisans, and engineers to society, continuing the annual tradition.

15 The Department of Mechanical Engineering, School of Engineering on September 25, 2024, hosted a hands-on skill-based competition called *Try Your Skill* (Mobile Stand Preparation) for faculty members. This event offered a unique opportunity for faculty to enhance their practical skills and delve into the art of carpentry.

(B) Placement

1 Placement Drives conducted at OPJU

Company Name: Code Young
For the Batch: UG/PG 2025

Company Name: Delta X
For the Batch: B.Tech 2025

Company Name: Uno Minda
For the Batch: B.Tech Metallurgy 2025

Company Name: SISCOL
For the Batch: B. Tech Mech 2025

Company Name: ProcMart
For the Batch: B. Tech/BBA 2025

RKM Powergen

Company Name: RKM Powergen
For the Batch: B. Tech/BBA 2025

2 Preparatory Session

- The Career Development Centre (CDC) was excited to launch the *OPJU WAT* (Weekly Aptitude Test) series for all final-year UG and PG students starting from September 6, 2024. They were entirely devoted to making students industry-ready by demonstrating the necessary skills and preparing them to excel in upcoming hiring drives. Each week, tests were shared with students on various topics commonly featured in online company assessments.

- CDC conducted 10 days Boot Camp titled *From Campus to Corporate* for final-year MBA students from September 16 to 30, 2024. This initiative was part of their commitment to making students industry-ready and equipping them with the necessary and desired skills.

3 Students selected through Campus Drives

(C) Research and Publication

1 **Dr. Dipti Shukla** from the Department of Physics, School of Science published a book titled *Physics: Basics & Advanced Concepts* in the CIRS publication. ISBN No.: 9-788197-944543

2 **Prof. Nandalal Acharjee** and **Dr. Prasenjit Biswas** from department of Metallurgical Engineering, SoE published a research paper titled *Uses of Black Pigmented CAS Glass in Conventional Ceramic Industry: Production, Impediments to Metallization, and Startling Approaches for Colour Evaluation* in the Journal of Pigment and Resin Technology, SCIE and Scopus Indexed Journal. *DOI: 10.1108/PRT-02-2024-0018*

3 **Dr. Nidhi Khobragade** from Department of Metallurgical Engineering, SoE published book chapter on *Fabrication and Applications of Advanced and Innovative Nano-Composite Materials* in book titled Design, Fabrication, and Significance of Advanced Nanostructured Materials, IGI Global Publishing (2024), ISBN13: 9798369353202. *DOI: 10.4018/979-8-3693-5320-2.ch006.*

4 **Dr. Umashankar Ghugar** from Department of Computer Science & Engineering, SoE published a research paper titled *A Case Study of Computer-Based Alzheimer Disease Diagnosis at the Premature Stage* in the Recent Advances in Artificial Intelligence and Smart Applications (RAAISA 2023) conference. (Innovations in Sustainable Technologies and Computing (ISTC), Springer. *DOI: 10.1007/978-981-97-3485-6_9*

(D) Achievements

1 **Dr. Nidhi Khobragade** from the department of Metallurgical Engineering, SoE participated in 5 days Online FDP program on *Material Characterization and Optimization through Soft Skills* organized by Department of Mechanical Engineering, CVR College of Engineering, Mangalpalli, Telangana from September 24 to 28, 2024.

2 **Dr. Saurabh Gupta** from the School of Management acted as Resource Person in Two days National Workshop on *R Software for Advanced Data Analysis* on September 13 to 14, 2024 organized by School of Commerce and Management and School of Economics, Gangadhar Meher University, Sambalpur.

3 **Mr. Gyan Prakash Sharma** from Department of Computer Science & Engineering, SoE attended a FDP on *Tech Savviness For Modern Educator* organized by Upto Skills on September 10 to 14, 2024.

4 **Dr. R. S. Singh,** School of Science, delivered an invited talk titled *Fabrication and Analysis of Graphene Based Photodetectros* in the Online One Week STC on *Nanomaterials, Sensors and Devices (ICT-143)* conducted during September 16 to 20, 2024 at National Institute of Technical Teachers Training and Research (NITTTR) Chandigarh.

5 **Ms. Priya Kumari, Mr. Ankit Kumar Sah** & **Ms. Anisha Sudhir Vikhar** students of B.Tech. 3rd semester from the Department of Computer Science and Engineering, SoE successful participated in the *Innovation, Design, and Entrepreneurship (IDE) Bootcamp, Edition-II, Phase-I*, organized by AICTE and MoE Innovation Cell, held from September 23 to 27, 2024 at Amity Jaipur. These prestigious events aimed for nurturing the innovation, design, and entrepreneurial skills of young innovators.

6 **Ms. Aditi Kesharwani**, student of B.Tech. 3rd semester from the Department of Computer Science and Engineering, SoE successfully completed a 3-month Mentorship Program with Pregrad during their training in *Artificial Intelligence with ML(AIML)*.

7 **Ms. Shilpy Kumari Gupta**, student of B.Tech. 5th semester from the Department of Computer Science and Engineering, SoE participated in
- *TATA Crucible Campus Quiz 2024* organized by the Tata Group.
- *CodeQuezt Contest # 12: The Ultimate Coding Challenge* hosted by Naukri Campus.

8 **Mr. Shashank Shekhar Pandey**, student of B.Tech. 2020-24 Batch from the Department of Computer Science and Engineering, SoE got selected as an Executive at *QUESS Winning Together*.

(E) Upcoming Events

Organized by

Department of Electrical Engineering
O. P. Jindal University
Raigarh (C.G.)

Important Dates

Full-length Paper Submission	: ~~September 30th 2024~~
	: October 22nd 2024 (EXTENDED)
Notification of Acceptance	: October 30th 2024
Date of Registration	: November 5th 2024
Camera Ready Paper Submission	: November 15th 2024
Conference To Be Held	: November 28th -29th 2024

Contact Details:

Dr. Sandeep Biswal (Chair)
Department of Electrical Engineering
O. P. Jindal University Raigarh
Chhattisgarh- 496109, India
Phone: 9179339691

Dr. Ankireddy Narendra (Co- Chair)
Department of Electrical Engineering
O. P. Jindal University Raigarh
Chhattisgarh- 496109, India
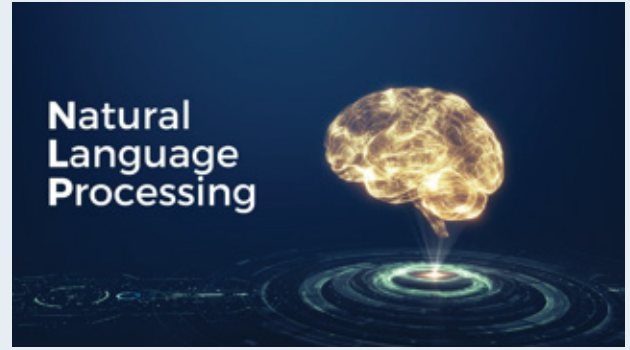Phone: 9109909253

Email : ieee.icspe2024@gmail.com

(F) Emerging Technologies/ Techniques

Role of Sanskrit Language in Natural Language Processing (NLP)

By: Dr. Arindam Patra, Assistant Professor. Department of Humanities, School of Science

The fields of Computer Science and Information Technology play a pivotal role in the development of innovative computing algorithms and machines endowed with advanced cognitive and computational capabilities. Sanskrit is regarded as a highly potent language, largely attributed to its intricate grammatical structure. It is characterized as a lexically productive language. The grammatical framework comprises straightforward and efficient rules that facilitate the transformation between diverse forms and sentence structures. The lexicon of the Sanskrit language encompasses a greater number of terms than any other language globally. It possesses the ability to convey a complete thought using fewer words than any alternative language. Sanskrit stands out as an exceptionally computer-compatible language. The utilization of Sanskrit within computational and technological domains holds considerable potential. A distinctive characteristic of Sanskrit is its dual case, a feature absent in other languages. A significant aspect of Sanskrit is the grammar delineated by Panini, which comprises systematic rules for word formation. This grammatical structure is primarily oriented towards semantic regulations, root structures, vocabulary classification, suffix categorization, and studies of gender. It is an innovative linguistic construct. Its attributes render it particularly conducive for computational applications. It serves as an efficient medium for algorithm development. Its versatility is notable, given the abundance of synonyms available for individual terms. It is recognized for its precision in pronunciation. The language exhibits an intelligent grammatical framework and employs descriptors for properties rather than mere objects. Special emphasis is placed on the dual case, the extensive application of Vibhaktis, support for significant inflection, and the meticulous pronunciation of each term. To ensure the meaning of a sentence remains unaffected by the arrangement of its components, Sanskrit features an inflection-based syntactic structure. Natural Language Processing (NLP) constitutes a branch of artificial intelligence devoted to creating systems that comprehend written or spoken language akin to human understanding. This field encompasses two primary phases: natural language understanding and natural language generation. NLP has numerous applications, including human-computer interaction, speech synthesis, and speech translation, among others. Many natural languages exhibit ambiguity, often possessing multiple interpretations. Various types of ambiguities exist, such as scope ambiguity, attachment ambiguity, semantic ambiguity, and pragmatic ambiguity. Despite being an ancient language, Sanskrit's distinctive features render it applicable in a variety of modern contexts. This paper has elucidated the significance of the Sanskrit language in research and its implications for human health. Based on the existing literature, it is concluded that there exists considerable potential for further exploration of Sanskrit across diverse research domains, including natural language processing, automatic speech recognition, speech synthesis, and machine translation.

Editorial Team

Chief Editor

Dr. Suchismita Panda
Assistant Professor. Dept.of Humanities.
OP Jindal University, Raigarh

Designer

Mr. Praveen Dewangan
Assistant Manager, Marketing & Outreach Dept,
OP Jindal University, Raigarh

Members

Dr. Arindam Patra
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OP Jindal University, Raigarh

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Assistant Professor (Sr. Grade), Dept of MME,
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OP Jindal University, Raigarh

OP Jindal University

Knowledge Park, Punjipathra,
Raigarh, Chhattisgarh
Ph.: 07767 254000

Webpage