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ENGINEERING COLLEGE**

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5 UG Programs

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PALS – 2022-23

PALS - Activities held in the month of October , Novemeber and December 2022

Activity -1

PALS SL Workshop Batch 3 - 2022-23 – 7th OCTOBER 2022,
between 10.00AM – 12.30PM

A workshop to communicate to you on PALS, the Student events as well as the Roles and Responsibilities of our Student Leaders. Batch 1 workshop is scheduled to be conducted **on 7th October 2022 between 10.00AM – 12.30PM.** **Meeting details will be sent soon.**

The first workshop would cover the following

1. Introduction to PALS
2. Description of all student events planned during the year
3. SL roles and responsibilities
4. Intro to PALS Portal
5. Group activity – Group discussion on the topic **“MY STRATEGY TO EFFECTIVELY GET MY COLLEGE STUDENTS TO DERIVE MAXIMUM VALUE OUT OF PALS EVENTS.”**

To enable you to become familiar with a group discussion format we would require you to go thru the link that was sent in the earlier mail on “Basics of Group Discussion”. This was conducted by our PALS Champion Mr S.Subramanian last year. This short 30 min recording also includes some Q&A from SLs last year which I am sure would also be relevant to you as well. PL go thru this recording before you attend the workshop in Oct 22

6. Feedback on the written submissions – general observations

SLs would be evaluated for their performance in activity 5 during this workshop by a panel from PALS.

Activity -2

PALS TECHNOLOGY SPEAKS on 13th October 2022, 1.30 PM – 3.30 PM

Topic: Cloud Computing

Speaker: Ms. Sabiya Parveen Sayyed, Software Architect.

Brief Abstract:

Overview of Cloud Computing

Characteristics of the Cloud

Cloud service models (IaaS, PaaS, SaaS)

Cloud Deployment Models

Cloud Adoption and Emerging Technologies

Speaker Profile:

Overall, 14 years of experience in IT, currently leading production enhancements team in IBM Supply Chain Business Network business unit. Education, Master of Science (MS) focused on Computer Software Engineering.

Certifications:

IBM Certified Technical Advocate - Cloud v3

IBM Certified Technical Specialist - Application Integration

Dr. M.G.R EDUCATIONAL AND RESEARCH INSTITUTE <small>(Chartered by the University with Unaided Autonomous Status) ISO 9001:2015 Certified Institution</small>	 PALS PALS 2022 – 23	SONA COLLEGE OF TECHNOLOGY <small>Learning is a Celebration! An Autonomous Institution</small>
TECHNOLOGY SPEAKS		
	SPEAKER Ms. Sabiya Parveen Sayyed, Software Architect	
TOPIC CLOUD COMPUTING		
Date : 13TH OCTOBER 2022 Time : 01.30 PM – 03.30 PM VIRTUAL EVENT (Contact Organizer for more details)		
PHONE : +91 95002 54011 Live in 5 days October 13 at 1:30 PM WEB SITE : www.palspgm.com	With the Support from  PARTNERS	IIT Madras Alumni Association Office, CCW building, IIT M Campus, Chennai – 600 036

Activity -3

OPEN FOR REGISTRATION :: PALS VLAB FACULTY DEVELOPMENT PROGRAM - OCT 19 - OCT 21 2022

The Faculty Development Programme jointly conducted by NITK and PALS is scheduled from **October 19th – October 21st 2022**.

Please note the following important details:

- This FDP programme is a 3 x half-day VIRTUAL programme from 9.30AM – 01.00 PM. It is a tightly packed schedule and hence request the attendees to make sure to realign their classes.
- If your college has not attended the PALS VLAB FDP conducted in the previous years, please register a **MAXIMUM** of **TEN FACULTY** for the FDP program (Faculty named in the EOI or others). If already attended in previous year, you can nominate **MAXIMUM of FOUR** faculty members who have not attended the earlier FDP sessions or any other kind of VLab training before.
- Full attendance in all the program events and active participation in quiz and assignment is mandatory for the participant to get a certificate.
- Detailed agenda and event details will follow soon.

- Since the program is virtual, the participants may ensure they have adequately working equipment and resources, and they follow appropriate protocols.
- Kindly request the nominated faculty to block their calendar and make arrangements for the online classes accordingly.

Requesting faculty to make note of the date and time and make arrangements to be available completely for the programme.

Activity -4

HEADS UP FOR ONLINE QUIZ FOR TINKATHON WORKSHOP SELECTION

To qualify and to attend the “Tinkathon” event, the student should have cleared an online quiz which will be held **on SUNDAY, 16th OCTOBER 2022**. Sunday has been chosen since we want the students to give a fair attempt without discussing the answers with each other in a lab type environment.

Please make note of the below

- Quiz link will be open on two slot windows on (SUNDAY) 16th OCTOBER. Students must take the quiz in that window only. There can be no exceptions on this.

SLOT 1 – 10.00AM – 10.30 AM

SLOT 2 – 3.00PM – 3.30PM

- Quiz link will be closed immediately once the duration is complete. Entries received within the time will be taken for assessment.
- As many students as possible can take part in the quiz. Quiz link is open for all PALS Partner institutes. Please inform the students upfront and watch out for more information from PALS in this regard.
- Top 5 students from each college (covering multiple departments) will be selected for the Tinkathon workshop.
- Timing of the quiz has been decided based on the students availability.

· Participating students should be given a name and number of a college coordinator who can be reached to during the quiz time. This will be mainly to address any logistics issue. PALS will be communicating through the EC / IC or SL group and hence the coordinator should be part of any of the group.

Please make note of the content and let the students know on the same. Questions will be from science / first year engg / Logical and analytical.

Activity -5

PALS TECHNOLOGY SPEAKS on 27th October 2022, 1.30 PM – 3.30 PM

Topic: AI DRIVEN TRENDS IN HEALTH CARE

Speaker: Mr. KrishnaKanth Naik, Senior Escalation Engineer, IBM India Pvt. Limited.

Brief Abstract:

I would like to share my learnings from the AI in Healthcare space, a very specific story in the Genome based solution development solution, that has fascinated me on how AI is expediting the generation of vaccines.

I would also be covering some facets of data science and where to get some of the public facing data sets. The session would end with how any student could extend their learning in this area using IBM learning materials.

Speaker Profile:

KrishnaKanth Naik, works for IBM for the last 16 years, and has been in IBM in the Application Lifecycle management space – a sub domain in Ai Apps division of IBM India Labs.

He has done his BE in Electronics & Communications, MTech from BITS Pilani in Design Engineering (Mech) and is currently doing his Advanced certification in Ai in healthcare with Indian Institute of Science.

His interests cover the areas of Design Thinking and NeuroLingusticProgramming (NLP), something that he had spoken about in his last session at PALS.

In today's talk he would be covering the Aspects of AI that promises new frontiers in medical diagnosis, how to approach learning and accessing data sets

and few pointers on what can students look up to IBM for learning the latest trends in the AI space

 Alpha College of Engineering THIRUMAZHISAI	 PALS PALS 2022 – 23	
PALS TECHNOLOGY SPEAKS		
	SPEAKER Mr. KrishnaKanth Naik, Senior Escalation Engineer IBM India Pvt. Limited.	
TOPIC AI DRIVEN TRENDS IN HEALTH CARE		
Date : 27th OCTOBER 2022 Time : 01.30 PM – 03.30 PM VIRTUAL EVENT (Contact Organizer for more details)		
PHONE +91 98416 39338 EMAIL palspgm@palspgm.com WEB SITE www.palspgm.com	With the Support from INDUSTRY PARTNERS	IIT Madras Alumni Association Office, CCW building, IIT M Campus, Chennai – 600 036

Activity -6

PALS-New Product NEXGEN 3D HACKATHON

The **PALS-New Product NEXGEN Hackathon**, that begins on 28th October 2022, concluding on November 4th & 5th of November.

NexGen 3D Printing, our proud industrial partner has taken the responsibility of creating the case studies and setting up the platform for the smooth conduct of the week-long hackathon event. Attractive prizes are earmarked by PALS for the best performers.

A certificate of participation will be awarded to the teams that participate in the final pitch after qualifying for the same through the different stages.

Flow of events is as below.

Date	Time	Event
28th October 2022 (Friday)	10.00AM – 11.00AM	A talk on New product Development by Mr. Krishna Rajagopal HTIC
	11.30 AM – 12 Noon	Registering Teams and the Team Online Test
29th October 2022 (Saturday)	11.00Am – 12 Noon	Hackathon Query session

Activity -7

THEORY TO PRACTICE(T2P) LECTURE - PATHWAY FROM ENGINEERING TO PRODUCT DEVELOPMENT AND ENTREPRENEURSHIP. ON NOVEMBER 3RD, 2022, BETWEEN 01.30 PM – 03.30PM

Topic

PATHWAY FROM ENGINEERING TO PRODUCT DEVELOPMENT AND ENTREPRENEURSHIP by Dr. Ashish Kumar Sahani, Assistant Professor, Department of Biomedical Engineering, IIT Ropar; Founder of Epilepto Systems .

Profile of the Speaker




Dr. Ashish Kumar Sahani, is working as an Assistant Professor at Department of Bio-medical Engineering of Indian Institute of Technology Ropar where he is heading the medical devices lab (MDL). Professor has a PhD from IIT Madras and postdoctoral training from Harvard Medical School and University of Michigan.

Dr. Ashish Kumar Sahani brings to the table a vast amount of technical know-how starting from the level of bare metal electronics and low-level firmware to machine learning, web development and virtual reality. He teaches multitude of courses on electronics, software design, Med-tech and business.

He is the Founder of Epilepto Systems, a BIRAC funded company working on software and wearable solutions for management of Epilepsy. He is also the strategic advisor to many other deep-tech and health-tech start-ups. His research has been funded by DST, BIRAC, AICTE, DBT, Wellcome Trust and IIT Ropar.

Abstract

This T2P session will summarize speaker's journey of building end-to-end medical devices and software solutions employing his wide ranging skills from bare-metal electronics to high level software engineering and AI. Speaker will talk about the different products that he has developed over the years such as ARTSENS, Amlex, AARMED, Auscl-D and FootPulse. He will also talk about his journey as a serial entrepreneur building and mentoring multiple startups.

		PALS 2022 – 23		
THEORY TO PRACTICE LECTURE				
	SPEAKER			
	DR. ASHISH KUMAR SAHANI			
	Professor, Department of Bio-medical Engineering, Indian Institute of Technology Ropar.			
TOPIC				
PATHWAY FROM ENGINEERING TO PRODUCT DEVELOPMENT AND ENTREPRENEURSHIP				
Date : 3RD NOVEMBER 2022 Time : 01.30 PM – 03.30 PM				
VIRTUAL EVENT (Contact Organizer for more details)				
PHONE	+91 98416 39338	With support from	IIT Madras Alumni Association Office, CCW building, IIT M Campus, Chennai – 600 036	
EMAIL	palspgm@palspgm.com	IIT MADRAS		
WEB SITE	www.palspgm.com	ALUMNI CHARITABLE TRUST		

Activity -7

PALS INNOWAH 2022-23 - PITCH YOUR PLAN (PYP)

Hope the heat is on, and you are busy preparing for the PYP event on November 10 and 11, 2022. To help you prepare for the Pitch of your plan, the empanelled jury will evaluate you for the following parameters.

1. Problem Definition:
2. Proposed Solution):
3. Autonomous: level of automation, ability to take a decision, self-regulating nature,
4. Specific: What metric/parameter is specifically addressed
5. Measurable: Metrics before /after,
6. Realistic Utility:
7. Attainable:
8. Timeline: Plan to complete the prototype/fabricated version by Feb third week, 2023.
9. Scalability: Ability and scope for scaling up.
10. Presentation Powerpoint – Title slide with team details+ 5 slides + Thank you Slide.

The participation of the team in the overall presentation, addressing the above points (optional)with the help of the video of the developed prototype (not more than two minutes)and the presentation that addresses the above parameters will be points to be considered.

The teams need to demonstrate the above parameters had been addressed in their projects with the help of their presentation and /or video, not exceeding 10 minutes. All team members should participate effectively in the interactive session as well. This should be in alignment with the Concept and Design Document submitted.

Based on their performance, all teams recommended by the panel will move to the finals of the innoWAH! competition.

Activity -8

ONLINE QUIZ FOR TINKATHON WORKSHOP SELECTION - RESULTS DECLARED

The results of the Online Quiz for Tinkathon is out. Please note the below in regard to the results.

Total of **47** Students from your college took part in the online quiz.

- 2 Student Leaders of your college get a direct entry to the Tinkathon workshop. They have been included in the list below marked in green.

Congratulations to the students who have made it to the shortlist.

In all, seven students from your college will attend the Tinkathon. No substitute other than the qualified students will be allowed for Tinkathon or RSW.

Student Name	Student Email	Student Mobile Number (Whatsapp)	Academic Year	Department
lbدران@gmail.com 212220033003	lbدران@gmail.com	6374207109	III YEAR	CIVIL
AKSHITH JOBIRIN S 212220040007	akshith2002jobirin@gmail.com	7530034495	III YEAR	CSE-
Hariharan E 212221040052	hariharan00332810@gmail.com	6385452810	II YEAR	CSE
Sandhya Charu 212220230041	sandhyacharu23@gmail.com	8248044515	III YEAR	AIDS
Sai Saravanan.S 212220060191	saisaravanans15@gmail.com	8637441644	III YEAR	ECE-
KIRAN RAAJ K.V	kiranraaj1507@gmail.com	9789994338	III YEAR	MECH
S.SHRIJA	shrijasekhar@gmail.com	6369608120	III YEAR	BME

Activity -8

HEADS UP - LAB TO MARKET CONCLAVE - 11th February 2023 at IIT Madras Research Park.

Our PALS theme for academic year 2022 - 23 is "**THINK LIKE AN ENTREPRENEUR**" under which we have been attempting to create various touchpoints in the "Lab to Market" supply chain.

It's now time to get your team of faculty and students to roll up their sleeves and get to action to participate in and experience the most engaging event that aims to bring to reality the outcomes of what has been aimed, processed and derived theories at labs to real life.

Yes! PALS is all set to give the experience to the inquisitive minds the transformations that can happen thinking beyond labs.

We will soon be inviting your team to our first **LAB TO MARKET CONCLAVE** which is planned for **11th February 2023 at IIT Madras Research Park**. The event will be a platform to transform the ideas and concepts from academics to products.

As a precursor to the conclave, we will have Live project contests from select startups and presentations from all your EDCs within the next 3 months.

This Conclave itself will provide a best-in-class platform for all the inquiring minds to experience, share and learn from each other and the experts on the nuts and bolts of the journey from Labs to Market places, apart from recognizing winners of startup project contest.

Activity -9

IBM Briefing sessions on Skills academy - NOVEMBER 16th 2022 between 11.00AM - 1.00PM

PALS is pleased to organize a webinar to introduce IBM's educational initiatives such as IBM Skills Build to PALS partner institute's and to provide details about the enrolment process with IBM for this program.

IBM Skills Build envisions its offerings would benefit industry by expanding the professional community base population possessing the expertise required to deliver future applications with technologies such as Artificial Intelligence, Cloud, Cybersecurity and Data Science.

IBM's academia facing personnel will present these details and also answer questions from the participants.

Senior Management and Senior Faculty of all of PALS Partner Institutes are invited to attend the webinar.

We have already shared enrollment documents received from IBM in the mail sent earlier.

When

IBM Skill Academy Awareness Program will be held on **16th November 2022** between **11.00AM – 01.00 PM**

Where

This will be a virtual program held in zoom platform. Details are as below.

<https://us06web.zoom.us/j/82845117839>

Meeting ID: 828 4511 7839 || Passcode: 1611219

Program Agenda:

11:00 - 11:05 - Welcome note by PALS

11:05 - 12:05 - IBM presentation

12:05 - 12:30 - Q&A

12:30 - 12:40 - Vote of thanks

Activity -10

FACULTY STUDENT DEVELOPMENT PROGRAM on
SPECTRAL GRAPH THEORY - Nov 24th and Nov 25th 2022
between 1.30PM - 4.00pm

TOPIC

SPECTRAL GRAPH THEORY

ABSTRACT - WE WILL INTRODUCE THE ADJACENCY AND LAPLACIAN MATRICES OF GRAPHS AND STUDY THEIR PROPERTIES. ALSO WE WILL DISCUSS SOME OF THE APPLICATIONS OF THESE MATRICES.

FACULTY FOR THE SESSION

Prof. M. Rajesh Kannan, Assistant Professor, Department of Mathematics, Indian Institute of Technology Hyderabad

[Prof. Rakesh Venkat](#), Assistant Professor, Department of Computer Science and Engineering, Indian Institute of Technology Hyderabad

PREREQUISITES

Faculty members / students with basic knowledge in linear algebra and graph theory.

PROGRAM OUTLINE

REVIEW OF MATRIX THEORY, ADJACENCY MATRICES AND THEIR APPLICATIONS (FIRST DAY); LAPLACIAN MATRICES AND THEIR APPLICATIONS (SECOND DAY)

24-11-2022 - Two lectures (possibly 1.15 hours each) by Rajesh Kannan

(Lecture 1 - Review of Matrix theory and Graph Theory;

Lecture 2 : Adjacency matrices of Graphs)

25-11-2022 - Rajesh Kannan (Lecture 3 : Laplacian matrices of graphs);

Rakesh Venkat (Lecture 4 : Applications of spectral graph theory)

Activity -11

PALS INDUSTRY VISIT - PHYSICAL VISIT TO ASHOK LEYLAND HOSUR PLANT - 9th NOVEMBER 2022

Time	Activity	Co- Ordinator
10.30 AM	Assemble, Register and complete attendance formalities.	PALS Team
11:00 AM	Welcome & assemble at H1 HRD center	
11:00 AM to 11:30 AM	HRD Plant presentation - Overview of facilities & activities at H1 plant Ashokleyland	Mr. Ramesh - Div Manager - HRD Training
11:30AM to 11:45 AM	Tea Break	
11:45AM to 1:15 PM	Visit -BSVI Engine assembly	Mr.Gerald - AGM - Engine Assy in charge
	Visit - Machine shop	Mr.Sivakumar - DGM/ Mr.Rajasekar- Div Manager - Machine shop incharge
1:15PM to 2:00PM	Lunch	Mr. Ramesh - Div Manager - HRD Training
2:00 PM	Assemble at Engine R&D Center - CAFÉ (Center of Alternate Fuel Engine Development)	
2:00 PM to 2:30 PM	Presentation on facilities , Current & Future Developments	Mr.Mayur /Mr.Kishore

2:30 PM to 3:15 PM	Facility visit	Mr.Yogesh - GM Engine Development
3:15 PM to 3:30 PM	Tea , Q &A , Conclusion gesture	Engine R&D Team
3:30PM	Departure from the plant	

Activity -12

PALS FDP on AI - ML - PHYSICAL EVENT ON 28th NOVEMBER 2022 BETWEEN 10.00AM - 4.00PM - VENUE IIT ALUMNI INDUSTRY INTERACTION CENTER

Venue

IIT Alumni Industry Interaction Center

IIT Madras Research Park, 10th Floor, C Block, Kanagam Rd, Tharamani, Chennai,

Tamil Nadu 600113

Date & Timings

November 28th 2022 – Monday - 10:00 am – 4.00 pm

Faculty for the FDP

Mr Sudarsun Santhiappan, Chief Scientific Officer, Buddi AI

Linkedin profile: <https://www.linkedin.com/in/sudarsun>

Topics to be covered during the one-day FDP**

Morning Session

- Introduction to the need for machine learning.
- Solving a simple classification problem.
- Understanding the need for metrics and analysis.
- Solving a simple regression problem.

- Caveats to take care of regression and classification tasks.

Afternoon Session

- Introduction to Neural Networks
- Setting up a regressor and classifier through Neural networks.
- Convolution networks and solving the MNIST digit recognition problem.
- Sequence learning and solving the text autocomplete problem.

** - This is a tentative list of topics. Faculty of the FDP may make minor alterations to it.

Pre-requisites:

Fluency in programming Python with sklearn, pandas, and NumPy pyplot & the allied packages for ML exercises

Requirements for Hands-on sessions

The faculty member should preferably come with a laptop that has the following packages pre installed.

1. Jupyter-notebook environment
2. sklearn, numpy, pandas, pyplot & the allied packages for ML exercises
3. Keras & the allied packages for DL exercises
4. On-demand installation should be possible with the availability of internet in the classroom.

Activity -13

PALS LAB TO MARKET OFFERING - ACADEMIA LED START-UPS

The first session on “**ACADEMIA LED START-UPS**” on **29th Nov 2022 Tuesday, 10.00am – 11.30 am.**

The first session we are bringing to you is a presentation by **Prof. Sujatha Srinivasan, Department of Mechanical Engineering, IIT MADRAS** who has created multiple start-ups on assistive technologies. We believe her experience will be a good case study for all institutions to learn how Faculty and Students can together work to create successful startups and business models.

Agenda:

Time	Agenda
10.00 AM	Introduction of Lab to Market Activities of PALS
10.10 AM	Introduction of Speaker
10.15 AM	Topic "Academia Led Start-ups–The Journey and some Case Studies from IITM" by Prof. Sujatha Srinivasan
11.00 AM	Open forum for discussions and Q&A.

Additional Information

For the **LAB TO MARKET CONCLAVE** to be conducted on 11th February, 2023:

- PALS will conduct a competition for "**Project Presentation**" where your **student start-up / EDCs** can showcase their projects to an eminent jury of mentors and investors. We request your institution's participation in this competition.
- Additionally, we will be sending you selected **real life problem statements from start-ups of the incubation cell of IIT Madras** for you to choose and work on. We will send you the details of the project and a google form where you can express your interest to participate.
- The **winners** from the above two activities will be recognized in the Lab to Market conclave to be held on 11th February 2023 and also be guided for mentoring and funding, where appropriate.

Activity -14

PALS FSDP ON MULTI-SCALE MODELING OF VARIOUS METAL ADDITIVE MANUFACTURING PROCESSES - DEC 7th & DEC 8th.

TOPIC

MULTI-SCALE MODELING OF VARIOUS METAL ADDITIVE MANUFACTURING PROCESSES such as WAAM, DED, and L-PBF.

ABSTRACT

Additive Manufacturing (AM) is a methodology for layer-by-layer manufacturing of materials. Additive Manufacturing off late is seeing exponential interest among Industries and researchers. However, there are several challenges in printing the materials. Simulations provide great convenience and cost-effectiveness in modeling the process of additive manufacturing. Through simulations, optimization of process parameters, low residual stress, and near-net configurations can be obtained at the component level. This course will deliver a detailed overview of modeling tools such as finite element methods, discrete element methods, and CFD to model various AM processes.

FACULTY FOR THE SESSION

Dr. Viswanath R R S R Chinthapenta, Associate Professor, Department of Mechanical & Aerospace Engineering, IIT Hyderabad

DATE & TIME

DECEMBER 7th & 8th between 10.00 AM – 12.30 PM

MEETING DETAILS

Will be shared with registered participants

PROGRAM OUTLINE

Topic-1: Numerical Modelling of Wire Arc Additive Manufacturing and Welding

Topic-2: Multi-scale modeling of Laser Powder bed fusion and Direct energy deposition processes.

Activity -15

EDC and INNOVATION CENTRE workshop

PALS in its **Lab to Market** initiative has so far conducted

1. Series of lectures,
2. Projects from Incubation Centre Start-ups,
3. Lab to Market Conclave, mentoring support for projects to become start-ups.

We are pleased to see the participation in the lectures and also the participation in the project debrief sessions.

As the next step we would like to know about your ENTREPRENEUR DEVELOPMENT/INNOVATION CELLS programs and projects. We would like to recognise and support your projects and help in the network required for these projects to seek appropriate contacts for incubation as well as funding support.

We would therefore like to know your interest in connecting with PALS for development of your EDCs and ICs. We request you to make a presentation of your startup projects and about your EDC in a 20 minutes presentation/discussion. Our PMO will set-up a slot with you for this discussion.

We are hereby attaching a google form you can fill up to give details of your current activities and also express your interest to carry it forward with our mentoring and support. Kindly fill in the form and mail it back by 21ST DEC 2022.

The idea is for us to understand your current status and your willingness to develop the initiative, we would like to know

1. the Involvement/participation of the institute in the EDC/IC activities at present,
2. if you would want support from PALS in terms of Knowledge sharing, Mentoring, Connecting to OTHER Incubation Cells, Funding support.
3. If you would like to be part of the Lab to Market Conclave where you get the opportunity to showcase your startup projects.

All the Best ...