

# RESEARCH

# FORUM

Volume 3, Issue 1



**OFFICIAL NEWSLETTER**

**RESEARCH & DEVELOPMENT CELL,  
ST. MARTIN'S ENGINEERING COLLEGE**

**Editor in Chief**

**Dr. P. Santosh Kumar Patra**



**St. Martin's Engineering College**

UGC Autonomous

NBA & NAAC A+ Accredited

Dhulapally, Secunderabad-500 100

[www.smec.ac.in](http://www.smec.ac.in)



# St. Martin's Engineering College

UGC Autonomous

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Dhulapally, Secunderabad, Telangana -500 100

# SMECRF

## ST.MARTIN'S CHILDREN'S EDUCATION SOCIETY FOUNDED ON 1982 (FOUNDERS)



**SRI G. DURGAIAH YADAV**  
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**SRI M.LAXMAN REDDY**  
President

**SRI CH. MALLA REDDY**  
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**ST. MARTIN'S ENGINEERING COLLEGE**

UGC - AUTONOMOUS

EAMCET/ICET CODE: MRTN

ARIIA  
ATL BANKING OF INSTITUTIONS  
ON INNOVATION ACHIEVEMENTS

ACCREDITED WITH GRADE **A+** NAAC

nirf  
National Institute Ranking Framework





# RESEARCH FORUM

## RESEARCH AND DEVELOPMENT CELL

### The Newsletter



From January 2024 to June 2024

#### Editor-in-chief:

**Dr. P. Santosh Kumar Patra**  
Group Director

#### Editors

**Dr. Sanjay Kumar Suman**  
Dean R&D

**Dr. M. Vadivukarassi**  
R&D Coordinator

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#### The Role of R&D in Innovation



Research and Development is an important part of any successful institution because it helps drive innovation. It mainly focuses on research and the development of new products and services and also in discover and creating new knowledge about scientific and technological topics for the purpose of uncovering new technologies and enabling the development of valuable new products, processes, patents, and services. Research and development (R&D) play an important role in innovation because they look into future technologies and provide insights on how those technologies will make an impact on their industry or market. R&D should not only focus on what's currently happening; they should also look towards the future to see what could happen with their industry as well as new potential markets that might emerge. This is where academic research comes into play, as they are better equipped to provide insights on what might happen in the future.

**BEST WISHES**

## FROM THE EDITORS

"Nothing changes if nothing changes." Well if nothing changes, we stay the same. We don't grow. We don't evolve. We don't get better. And that's not going to work—not for you, and not for the world. We need positive change. We need new ideas. We need progress. So inspire *your* ideas and contribute yourself and the greater good.

**"Thinking up new things is Creativity. Doing new things is Innovation."**

With best wishes  
Editors

## RESEARCH FORUM

Journal	Conference Proceeding and Book Chapter	Patents	Books
Discussions & Meetings	Seminar - Webinar	Workshop-FDP	Project Expo
MSME	Hackathon	Govt. Funding Project	IIC
MOU	ATAL FDP	Consultancy Projects	External Conference

## **Guidelines for Publications**

### **+** For Doctorate:

- 2 SCIE Journal **OR**
- 1 SCIE Journal and 2 Scopus/ESCI Journals **OR**
- 4 Scopus/ESCI Journals
- **and** 6 Patents or Copyright
- Funded project submission is compulsory for Associate Professor and Professor.

### **+** For PG (10 years and above)

- 1 SCIE Journal **OR**
- 2 Scopus/ESCI Journals **OR**
- 1 Scopus/ESCI Journal (Mandatory) and 2 Indexing Conference Proceedings / Book Chapters
- **and** 3 Patents or Copyright
- [The indexing conference will be counted in the external conference category.]

### **+** PG (5 years and above)

- 1 Scopus/ESCI journal (Mandatory) and 1 indexing Conference Proceedings/Book Chapters
- **and** 2 Patent or copyright

### **+** PG (less than 5 years)

- 2 Indexed Conference Proceedings/Book Chapters **OR**
- 1 Scopus/ESCI Journal

### **+** Common to all faculties:

- 1 Internal conference
- 1 External conference

### **+** Desirable:

- Awards
  - NPTEL course
  - Invited lecture
- 

*"If you steal from one author it's plagiarism; if you steal from many it's research."*

*- Wilson Mizner*

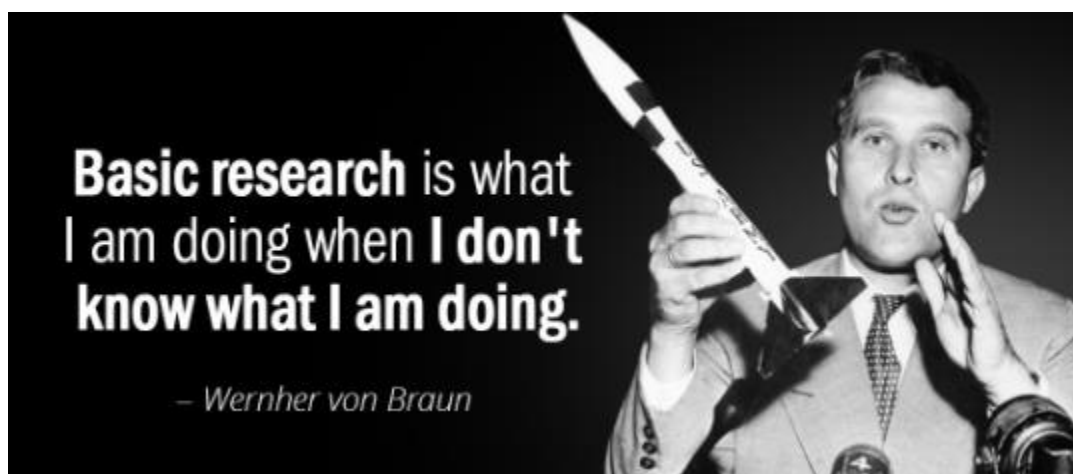


## Introduction to Research and Development Cell

Research and Development Cell (RDC) is an extension of the vision, mission and commitment of **Dr. P. Santosh Kumar Patra, Group Director**, St. Martin's Children's Education Society, Secunderabad, since 2016, to move forward towards excellence in academic, research and sports in all areas which are important in country's development. The RDC of SMEC facilitates and encourages research culture among the faculty and students. Its prime role is to establish a connection with the real world and promote research through a range of publications. It has six dedicated laboratories to solving problems in cutting edge technological issue to future applications of national relevance.

It enables a congenial environment for technological development and monitors the research activities of the college. It takes upon the responsibility of creating a work place to attract the best talent and strives continuously in pooling of skills and internal resources, creating strategy, overcoming limitations, and makes the institute proud to be amongst the best institutions around the country.

Under the visionary leadership of **Chairman of RDC and Group Director of SMEC: Dr. P. Santosh Kumar Patra**, the college is able to obtain the grant in excess of **Rs. 594 crores** from various agencies like GHMC, HWMSSB, MSME, DST, IIT BOMBAY, AICTE, foreign funding etc. The publication statistics including **journals: 14608+**, **patents: 510+**, **books: 148+**, **conference proceedings: 1055+**, **MoU: 108**, **copy rights: 36** and citations are credit worthy. In addition, RDC holds a credit of **138 innovative products** which are developed by students and faculty and 40000 international certification courses.



### **Vision**

To implement, maintain and continually improve the research ecosystem of the Institute that contribute pragmatically towards the goal of a self-reliant nation.

### **Mission**

- Provision of resource and favourable environment for enhancing the research productivity.
- To promote collaborative research, innovation, technology development, and enterprise activities with industry, government, non-government, state, national and international organisations and agencies.
- To identify and implement resource and funding mobilisation system for facilitating greater access to research to students, research scholars and faculty members.

### **Objectives**

1. To develop an organisation structure for proper functioning of various role of the cell.
2. To formulate and implement the research policy across the institute.
3. Identify major research areas across disciplines institute-wide, and set up a consortium of researchers.
4. To set up human resource, procurement, and financial management system with adequate autonomy to the Principal Investigator(s)
5. To publish the outcomes of research at the global level.
6. To establish a unique vehicle for promotion of researchers, innovators and star-ups.
7. To develop a consultancy services within the cell for to identify
8. To establish domain based centre of excellence

## Editor in Chief



**Dr. P. Santosh Kumar Patra**, Group Director of St. Martin's Engineering College and trust is the only person in Telangana to receive continuously FOUR times "GOVERNOR AWARD from Governor of Telangana, in addition to "Rashtriya Gaurav Award", "Rashtriya Vikas Ratan Award", "Dronacharya Award", Young leader of the year &

IBAE International Award, Dubai; The Engineering Educators' Award 2019; NIRDPR Award (Govt. of India); IDF Best Partner Award; Dewang Mehta Award; TCS ION Award; CSI Award (Students Chapter); Best Innovation by Federation of Gujarat Industries, Street Cause-Most Dedicated Division, Best college award from Education Matter, Best College in sports facility and achievement by Stumagz, Telangana, National Leadership Excellence Award- 2019 by ICCI. Best Engineering College by American College of Dubai, Dubai. He has maintained the highest amount of consultancy and industry sponsored projects in Telangana state amount of Rs. 444 crores from GHMC, Hyderabad & Rs.150 crores from HMWSSB, Hyderabad, Govt of Telangana. He has received Rs. 1.8 Crores funds from DST, IIT Bombay and AICTE. He is bestowed with Rs. 31 lakhs from UGC as a PARAMARSH (Advisor). He had facilitated 300 Aakash tablets from IIT, Bombay. Rs.1 crore approval from MSME for Business Incubation. NIRF Ranked and ARIIA ranked under excellent band, Careers 360 Certified as AA+; Competition Success Review Ranked in top 3; and Wikipedia Ranked 2nd in Telangana. Rs. 21.46 Lakhs received from SERB, Government of India, Rs. 30 lakhs from NIELIT, Chennai, Govt of India, Rs. 29 lakhs from MSME, Govt of India. Rs.31 lakhs from UGC. Recently Rs.18 lakhs funding from AICTE was also received. He has also received international award and funding (4000 USD) from George Mason University Virginia, USA.



In his crowning glory he has achievements like publishing 48 patents and his 30 patents are selected by different companies for commercialization. He has published 50 books and more than 108 international & national research papers, 28 magazine articles & 188 newspaper coverage. He is an active member of ISTE, CSI, IAENG (Canada), MASPRS (USA), Senior Member of IACSIT (Singapore), Senior Member of CSTA (USA), SDIWC (USA), Senior Member of SCIEI (Canada), Senior Member of IEDRC (Hongkong), Member of WASET (USA) & Technical Advisor for Alaxia, Japan.

He also received the award titled “Outstanding Institute with best placements” by the world education summit on 3<sup>rd</sup> October 2023 in Malaysia. He has been honoured as an Advisor to NAAC, Bengaluru (Only person in India from private college), UGC-Paramarsh, National Cyber Safety & Security Standards, Govt. of India. He is on the editorial board of TATA MCGRAW HILL International Publication, Charulatha Publication, Hi Tech publication, Spectrum publication etc.

On 21st August 2022 he is the only one from Telangana to receive the most prestigious Award named “National Happiness Unicorn Award” from Chairman of AICTE and the Programme was attended by Smt.Kalvakuntla Kavitha garu, honourable M.L.C. of Nizamabad, Kamlesh D Patel, known as Daaji, Heartfulness Guide and other many icons from the globe. Under his excellency as a Principal, his innovative thinking, able leadership, meticulous planning, dynamism, dedication, diligence and commitment have achieved great laurels for St Martin’s Engineering College and few of them are like awarded with prestigious grade A+ from NAAC (only 27 colleges in India, awarded A+ grade by NAAC), 2(f) & 12(B) Recognized by UGC Act of 1956, all courses are NBA accredited, Received UGC-Paramarsh (only young college in Telangana to receive), ISO certified, DSIR Recognition, J-Hub certified (JNTUH), TASK certified (Govt. of Telangana), 5 star from Institute Innovation Council (MHRD-Govt. of India), Remote centre of IIT Bombay, Member of CII and MSME certified Institution

. Honours and Minors from JNTUH (Only 10 colleges under JNTUH permitted for this), AICTE KARMA scheme approved. NCC girls and Boys wings approved. Students’ placement reached 100% along with high pay packages like 27 and 50 Lakhs which was witnessed across India and created a remarkable history in the glory of St. Martin’s.

## **+ Keynote Speech: Social Media Distraction**



Social media has undeniably revolutionized the way we communicate, connect, and consume information. However, amidst its myriad benefits, there lies a significant drawback: distractions. The allure of scrolling through endless feeds, liking posts, and engaging in online discussions can easily consume hours of our precious time, detracting from our productivity and focus on more meaningful tasks. One of the primary ways social media becomes a distraction is through its addictive nature. Platforms like Facebook, Instagram, and Twitter are meticulously designed to keep users engaged for as long as possible. They employ algorithms that tailor content to individual preferences, creating a personalized experience that hooks users in and encourages prolonged usage. This constant stream of new content, notifications, and updates can disrupt our workflow and lead to a cycle of endless scrolling, leaving us feeling drained and unproductive. Moreover, social media distractions often blur the boundaries between work and leisure. With the prevalence of smartphones and constant connectivity, it's all too easy to succumb to the temptation of checking notifications or responding to messages during work hours. This fragmented attention not only diminishes our productivity but also hampers our ability to fully immerse ourselves in tasks, resulting in subpar outcomes and increased stress levels.

In conclusion, while social media has undoubtedly enriched our lives in numerous ways, it also poses significant challenges in terms of distractions. The addictive nature of these platforms, coupled with their ability to blur the boundaries between work and leisure, can detract from our productivity and mental well-being. As we navigate the digital landscape, it's essential to cultivate awareness and mindfulness to mitigate the negative effects of social media distractions and reclaim control over our time and attention.

## R&D PROGRESS OF JANUARY 2024 - JUNE 2024

Progress from January 2024 to June 2024					
S. No.	Dept	Published/Accepted		Patents	Books
		Journals	Scopus_CP & BC		
1	CSE	60	18	27	5
2	CSE Allied	47	8	37	14
3	IT	19	25	68	10
4	ECE	41	23	30	9
5	EEE	10	7	18	9
6	Mech	11	0	14	1
7	Civil	3	3	11	8
8	FME	3	4	23	1
Total		194	88	228	57
567 Publications					

## Comparison

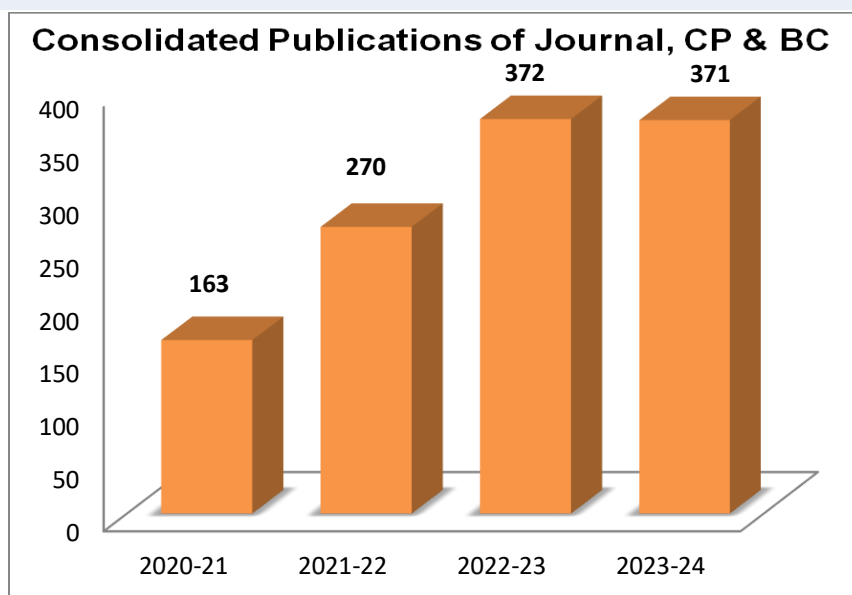
### RDC: Publication Progress

Particulars	No. of Publication	
	2022-2023	2023-2024
SCIE	14	28
Scopus / WOS	25	86
Indexed Conference	47	93
Indexing Book Chapter	13	11
UGC care 1 journal	115	75
Google Scholar journal	74	70
Internal Conference	491	690
External Conference (Presentation)	89	38
NPTEL Registered	8	31
Patents	54	362
Copy Right	29	21
Book	95	93

## PUBLICATION REPORT (July 2023 to June 2024)

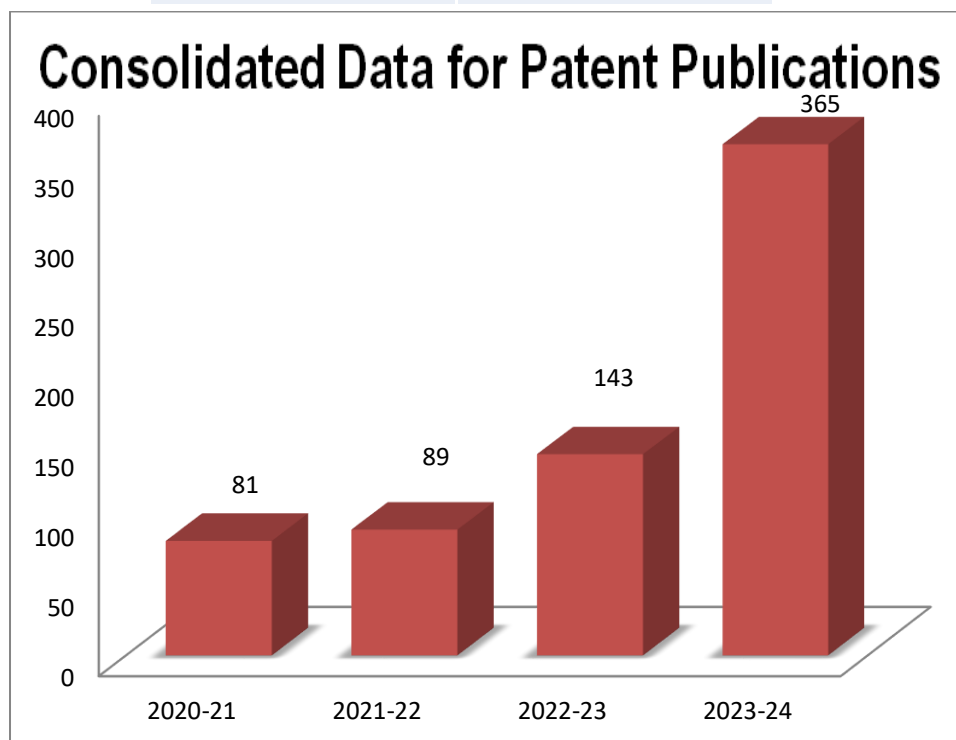
Dept.	Journal	CP& BC	Internal & External Conference
CSE	64	27	151
CSE Allied	51	8	87
IT	21	27	179
ECE	46	25	106
EEE	10	7	15
MECH	27	2	52
CIVIL	11	3	63
FME	37	5	75
<b>Total</b>	<b>267</b>	<b>104</b>	<b>728</b>

**1099 articles are published in 1 year**



## Patents

July 2023 to June 2024	
Dept.	Published
CSE	64
CSE Allied	73
IT	85
ECE	50
EEE	23
Civil	22
Mech	23
FME	25
<b>Total</b>	<b>365</b>

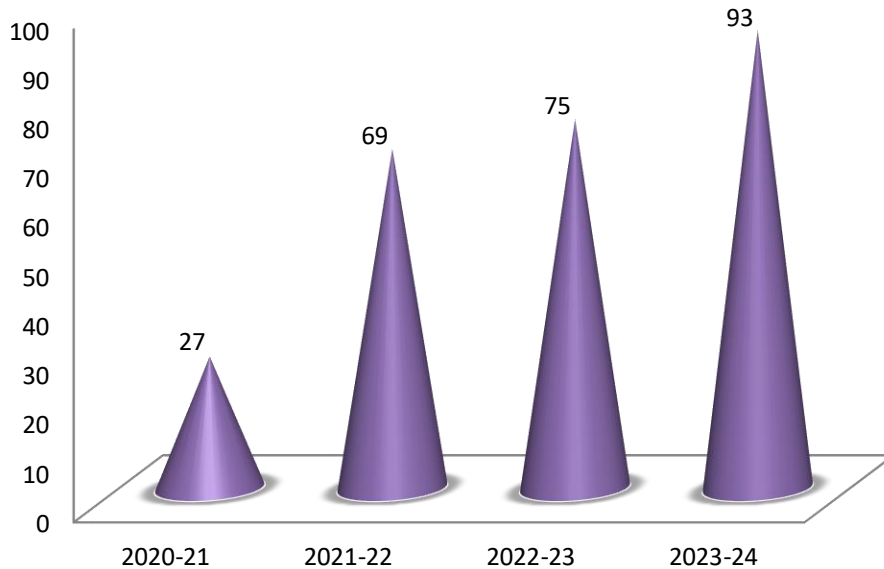


## Publications: Books

July 2023 to June 2024

Dept.	Published
CSE	10
CSE Allied	28
IT	14
ECE	6
EEE	15
Mechanical	1
Civil	13
FME	6
Total	93

### Consolidated Data for Book Publications



## GOVERNMENT FUNDED PROJECTS

Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/Co- investigator	Departme nt of Principal Investigat or	Amount Sanctioned	Duration of the project	Name of the Funding Agency
<b>AY 2021-2022</b>					
<b>Comprehensive Road Maintenance plan (CRMP) GHMC</b>	Mr. B Bhanu Prasad / Mr. V. Rajesh	Civil	344 crores	5 years	GHMC
<b>GHMC - TPQC</b>	Mr. B Bhanu Prasad/ Mr. V. Rajesh	Civil	100 crores	3 years	GHMC
<b>HMWSSB</b>	Mr. B Bhanu Prasad / Mr. V. Rajesh	Civil	50 crores	2 years	HMWSSB
<b>Plastic Pavement Blocks</b>	Mr. S. Naveen	Civil	8,75,000	1 year	MSME
<b>Economic design of slabs using HDPE Balls</b>	Mrs. K. Snehalatha	Civil	11,00,000	1 year	MSME
<b>Development of Horticultural Manned Robot for Ripe Mango Fruit Plucking</b>	Konga Bharathi	CSE	11,00,000	1 year	MSME
<b>AY 2022-2023</b>					
<b>Artificial Intelligence Framework for Skin Cancer Detection and Classification</b>	Parvathapuram Pavan Kumar	ECE	11,99,800	1 year	MSME
<b>Waste Water Treatment by Electro-Coagulation using Iron Electrode</b>	Dayapalle Naresh Kumar	Civil	12,00,000	1 year	MSME
<b>NIELIT Academy</b>	Dr. B. Hari Krishna	ECE	7,42,661	2 years	NIELIT
<b>AY 2023-2024</b>					
<b>Mentor Institution</b>	St. Martin's Engineering College		2,25,000	1 years	MHRD IIC
<b>Smart litter-cam</b>	Manaswini		13,50,000	1 year	MSME
<b>Determining the nutritional content of dishes</b>	T.Bhargavi		11,41,000	1 year	MSME
<b>Ai powered one touch emergency services</b>	Meeripelly Sanjana		13,35,000	1 year	MSME

## COLLABORATIONS

### MOU SIGNED WITH VICTORIA UNIVERSITY, AUSTRALIA

The Association of St.Martin's Engineering College with Victoria University, Australia St.Martin's Engineering College is rewriting the history in technical education by signing an MoU with Victoria University, Australia. The motto of the college is to create opportunities for its students universally. As a part of this mission statement, Professor & Group Director, Dr.P.Santosh Kumar Patra paves the way to martinian expert students and faculty members to unveil the skills set at Victoria University, Australia. St.Martin's Engineering College has reached this mile stone through the collaboration between St.Martin's Engineering College and the Australian university by exchanging students and staff as well as through the joint contribution in R&D. The team St.Martin's Engineering College will surely become a knowledge hub for all the aspiring technocrats in this global context. The process is in progress through this initiation to imprint the Martin's steps in technical education.



This outstanding international achievement has become a reality under the guidance of the visionary Group Director, Dr.P.Santosh Kumar Patra. This joint venture will also fetch international accolades in association with the team of Mr. Rupesh, CEO and Dr. Andrew, Global Head, Victoria University, Australia. The most delighted management members of SMEC, Chairman Sri M Laxman Reddy Garu, Executive Director Sri G Chandrasekhar Yadav Garu, Director Sri G.Jai Kisan Yadav Garu and Professor and Group Director Dr.P.Santosh Kumar Patra have



conveyed that SMEC has now become the prime institute by offering international standard education and 100% placements.

**MOU SIGNED WITH SOUTHERN ACADEMY OF HIGHER EDUCATION, SYDNEY**

A landmark success is achieved once again by St.Martin’s Engineering College to up skill academic excellence at par with international standards. The collaboration between St.Martin’s Engineering College and Southern Academy of Higher Education, Sydney, Australia is a long awaited dream of the Professor & Group Director, Dr.P.Santosh Kumar Patra to synergies the professional capabilities of St.Martin’s and Southern Academy of Higher Education, Sydney, Australia towards capacity building, education, research and consulting. St.Martin’s Engineering College has always been a torch bearer in the history of technical education and this collaboration has enabled St.Martin’s Engineering College to reach the most awaited global identity.

**నమస్తే తెలంగాణ**

**సీఎస్ఎహెచ్ఈతో సెయింట్ మార్టిన్ ఎంఓయూ**

కుత్బుల్లాపూర్, ఫిబ్రవరి 23: ప్రపంచవ్యాప్తంగా విద్యారంగంలో వస్తున్న అధునాతన మైన మార్పులను స్వదేశీ విద్యార్థులకు పరిచయం చేసేందుకు గానూ దూలపల్లి సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల ప్రత్యేక చొరవతో ముందుకొంది. దీనిలో భాగంగానే ఆస్ట్రేలియా సిడ్నీ నదరన్ అకాడమీ ఆఫ్ హ్యూయర్ ఎడ్యుకేషన్తో దూలపల్లి సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల మధ్య శనివారం ఒప్పందం కుదుర్చుకున్నారు. సెయింట్ మార్టిన్ గ్రూప్ డైరెక్టర్ ప్రొ.పి.సంతోష్ కుమార్ పాత్ర నదరన్ అకాడమీ ఆఫ్ హ్యూయర్ ఎడ్యుకేషన్ డీన్ డా.జాన్ బృందంతో కలిసి ఇరువురి మధ్య ఒప్పంద పత్రాలను అందిస్తున్నారు. సెయింట్ మార్టిన్ గ్రూప్ డైరెక్టర్, ట్రీనినిపాల్ డా.సంతోష్ కుమార్ పాత్రను కళాశాల చైర్మన్ మర్రి లక్ష్మ



సిడ్నీ నదరన్ అకాడమీ ఆఫ్ హ్యూయర్ ఎడ్యుకేషన్తో ఒప్పందాన్ని కుదుర్చుకున్న దూలపల్లి సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల గ్రూప్ డైరెక్టర్ డా.సంతోష్ కుమార్ పాత్ర తదితరులు

బోరెడ్జి, ఎగ్జిక్యూటివ్ డైరెక్టర్ జి.చంద్రశేఖర్ యాదవ్, డైరెక్టర్ జి.జై.కిసాన్ యాదవ్, ప్రొఫెసర్లు, కళాశాల అధ్యాపక బృందం అభినందించారు.

24/02/2024 | Hyderabad | Page : 9  
Source : <https://epaper.ntnews.com/>

We, the Team Martins, celebrate this outstanding international achievement with pomp and ceremony. This joint venture will surely help Martinians to highlight their skill sets globally which will fetch international accolades in association with the team of Dr. John, Dean, International Collaboration, Southern Academy of Higher Education, Sydney, Australia. At this auspicious occasion, Chairman Sri M Laxman Reddy Garu, Executive Director Sri G Chandrasekhar Yadav Garu, Director Sri G.Jai Kisan Yadav Garu and Professor and Group

Director Dr.P.Santosh Kumar Patra have expressed their extreme happiness and heartfelt thanks to all the stake holders of St. Martins Engineering College.

**MOU SIGNED WITH MELBOURNE INSTITUTE OF TECHNOLOGY, AUSTRALIA**

St.Martin’s Engineering College is moving towards the western direction to become a prime institution with international standards soon. The most awaited global identity of St.Martin’s Engineering College has become a reality. In the history of technical education, St.Martin’s Engineering college is opening a new page through the process of signing an MOU with Melbourne Institute of Technology, Australia for the outstanding performance of martinian technocrats and expert staff members through the collaboration by students exchange, faculty exchange and collaborative research contributions with the foreign university. It’s a great achievement for the team St.Martin’s Engineering College under the guidance of the dynamic Professor & Group Director, Dr.P.Santosh Kumar Patra.

**నమస్తే తెలంగాణ**

**సెయింట్ మార్టిన్ లో అంతర్జాతీయ ప్రమాణాలతో విద్య**

కుత్బుల్లాపూర్, ఫిబ్రవరి 22 : దూల పల్లి సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాలలో అంతర్జాతీయ స్థాయి ప్రమాణాలతో కూడిన నూతన విద్యా విధానాలను అమలు చేసేందుకు పలు పేరుగాంచిన యూనివర్సిటీలతో ఎంఓయాలకు కుదుర్చుకున్నట్లు కళాశాల గ్రూప్ డైరెక్టర్ ప్రొ.సంతోష్ కుమార్ పాత్ర తెలిపారు. మొదటగా ఆస్ట్రేలియా మెల్బోర్న్ లోని స్వీన్ బర్న్ యూనివర్సిటీతో ఎంఓయాలకు కుదుర్చుకోగా, మరోసారి ఆస్ట్రేలియా లోని మెల్ బోర్న్ ఇన్ స్టిట్యూట్ ఆఫ్ టెక్నాలజీతో ఎంఓయాలకు కుదుర్చుకున్నట్లు తెలిపారు. ఈ సందర్భంగా ఆయన మాట్లాడుతూ.. విద్యార్థులకు నాణ్యమైన విద్యతో పాటు టెక్నికల్ రంగంలో రాజీం చేయకుండా కావాల్సిన విద్యాప్రమాణాలను అందించేందుకు మెల్ బోర్న్ ఇన్ స్టిట్యూట్ ప్రామాణికంగా నిలువనున్నదన్నారు. ఈ కార్యక్రమంలో ఆస్ట్రేలియాలోని మెల్ బోర్న్ ఇన్ స్టిట్యూట్ ఆఫ్ టెక్నాలజీ హెడ్ సుష్మా, సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల డైరెక్టర్ జి.చంద్రశేఖర్ యాదవ్, జి.జై.కిసన్ యాదవ్ పాల్గొన్నారు.



ఆస్ట్రేలియాలోని మెల్ బోర్న్ ఇన్ స్టిట్యూట్ ఆఫ్ టెక్నాలజీతో ఎంఓయాలకు కుదుర్చుకున్న సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల డైరెక్టర్ జి.చంద్రశేఖర్, గ్రూప్ డైరెక్టర్ డా.సంతోష్ కుమార్

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Source : <https://epaper.ntnews.com/>

It is not just a beginning to start the joint venture with Melbourne Institute of Technology, Australia but to showcase the skills set globally with funding support through this historic milestone. St. Martin’s has again proved that martinians can associate with the team of Ms. Sushma, Global Head, Melbourne Institute of Technology, Australia, and utilize the opportunity to enhance practical approaches at International level too. On this historic occasion, Chairman Sri M Laxman Reddy Garu, Executive Director Sri G Chandrasekhar Yadav Garu, Director Sri G.Jai Kisan Yadav Garu and Professor and Group Director

Dr.P.Santosh Kumar Patra have expressed their extreme happiness and assured that the students and staff members will utilize this International opportunity.

**MOU SIGNED WITH SWINBURNE UNIVERSITY OF TECHNOLOGY, MELBOURNE, AUSTRALIA**

“Seeking Technical Education” at St.Martin’s Engineering College is going to become an outdated note at St.Martin’s Engineering College very soon. The most awaited global identity of St.Martin’s Engineering College now becomes a reality. St.Martin’s Engineering college in the history of technical education at under graduation level by initiating the process of signing an MOU with Swinburne University of Technology, Melbourne, Australia for the all round growth of martinian technocrats and outstanding staff members through the collaboration by students exchange, faculty exchange and collaborative research contributions with the foreign university.

**నమస్తే తెలంగాణ**

**ఆస్ట్రేలియా స్విన్ బర్న్ యూనివర్సిటీతో సెయింట్ మార్టిన్ కళాశాల ఎంఓయూ**

కుత్బుల్నగర్, ఏప్రిల్ 21: అంతర్జాతీయ స్థాయిలో విద్యావైపువ్యాల్లో రాజీంచేందుకు మూలపత్రి సెయింట్ మార్టిన్ కళాశాల ఆస్ట్రేలియా మెల్బోర్న్లోని స్విన్ బర్న్ యూనివర్సిటీతో ఎంఓయూ కుదుర్చుకుంది. ఈ సందర్భంగా కళాశాల చైర్మన్ ఎం.లక్ష్మకేరెడ్డి మాట్లాడుతూ.. మారుమన్ను కాలానికి అనుగుణంగా మన్ను మూతన అవకాశాలను విద్యార్థులకు అందించేందుకు అంతర్జాతీయ స్థాయిలో విద్యా ప్రమాణాలను అందించే దిశగా పేరుగాంచిన స్విన్ బర్న్ యూనివర్సిటీతో అందరి క్రాద్వయమనస్థాయిలో ఫ్యాల్టీ మార్పిడి, సహకార పది



**స్విన్ బర్న్ యూనివర్సిటీతో ఎంఓయూ కుదుర్చుకున్న సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల యోజనామండలి**

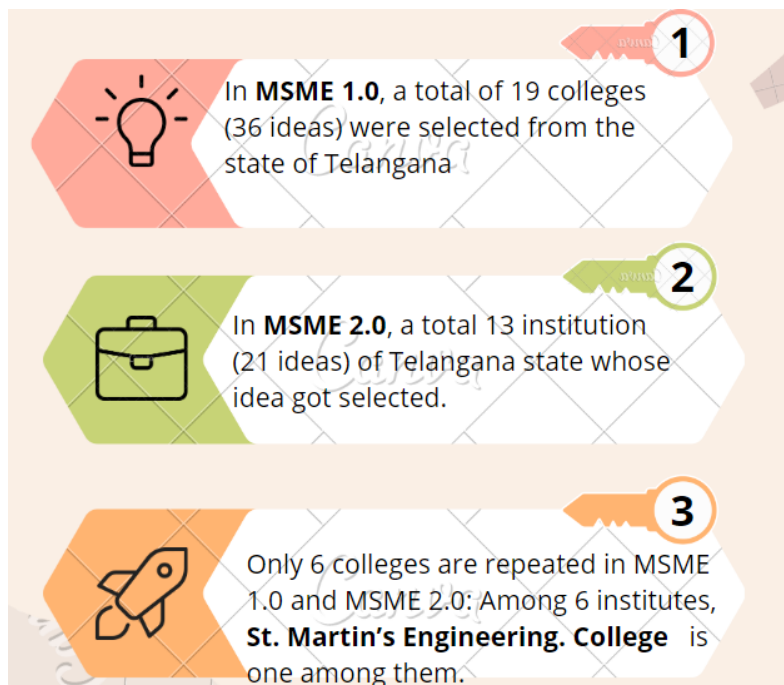
కోడన రవిసలు వంటి అనే బిక్రీతర్ ఎద్దుకుషి అడిలీనా, సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల చైర్మన్ డి.నంద్రకేఖర్ యాదవ్, డి.జై.కిషాన్ యాదవ్, ప్రొ.జూపి చైర్మన్ డా.పి.సంతోష్ కుమార్ పాత్ర తదితరులు పాల్గొన్నారు.

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Source : <https://h.paper.ntnews.com/>

It’s a golden opportunity for St.Martin’s students and staff members to start the joint venture with Swinburne University of Technology, Melbourne, Australia and showcase the skills set globally with funding support through this historic milestone. St. Martin’s has again proved that martinians can associate with the team of Ms. Adelina, Global Relation Officer, Swinburne University of Technology, Melbourne, Australia and spread the expertise dexterously at International level too. On this historic occasion, Chairman Sri M Laxman Reddy Garu, Executive Director Sri G Chandrasekhar Yadav Garu, Director Sri G.Jai Kisan Yadav Garu and Professor and Group Director Dr.P.Santosh Kumar Patra have expressed their extreme happiness and assured that the students and staff members will utilize this International opportunity.

## MSME Achievements

Within the vibrant ecosystem of SMEC, the emphasis on encouraging budding entrepreneurs is not just a philosophy but a tangible commitment to shaping the future of business leadership. Students at SMEC are not only exposed to theoretical knowledge but are also actively trained in the practical aspects of this world. Some of the MSME achievements in SMEC are:



In recognition of SMEC's dedication to fostering entrepreneurship, the institution secured Rs. 1 crore seed capital from MSME Government of India and 55 lakhs for 5 projects from the Innovation Scheme Incubation Component.

MSME Version	Received	Uploaded	Approved	Project Cost
MSME 1.0	44	28	3	30.75
MSME 2.0	33	31	2	23.998
MSME 3.0	121	103	3	38.26
<b>Total</b>				<b>93.008</b>

## MSME 3.0 for women Innovators

The idea Hackathon 3.0 scheme for women innovators is launched on June 27, 2023, to promote and support untapped creativity and to promote adoption of latest technologies in MSMEs that seek the validation of their ideas at the proof-of-concept level. The women of SMEC has actively participated in idea Hackathon 3.0.

In the IDEA HACKATHON 3.0 which was exclusively for women:

- A total of 121 ideas were received
- Currently, 103 ideas have been uploaded.
- 3 ideas are approved from St. Martin's Engineering College.

S. No.	Ref. No.	Incubatee Name and Category	Title of proposed idea/ innovation/ Sector
1.	IDEATS013165	Manaswini	Smart litter-cam
2.	IDEATS010947	T.Bhargavi	Determining the nutritional content of dishes
3.	IDEATS012378	Meeripelly Sanjana	Ai powered one touch emergency services

Idea Ref. No.	Project Cost	Amount Sanctioned	Incubatee Share
	(in Lakhs)		
IDEATS013165	13.500	11.475	2.025
IDEATS010947	11.410	9.699	1.712
IDEATS012378	13.350	13.350	0.000



## MSME 2.0

A total of 276 Proposals approved during 4<sup>th</sup> PMAC Meeting of MSME Innovative Scheme held on 26.06.2023 & Announced by Hon'ble Prime Minister on the occasion of International MSME Day at Vigyan Bhawan, New Delhi on 27<sup>th</sup> June, 2023.

### In the IDEA HACKATHON 2.0:

33 ideas were received, 31 were uploaded, and two ideas were approved.

The two innovative ideas presented were:

1. Wastewater treatment by electro coagulation using iron electrodes
2. AI framework for skin cancer detection and classification

S.No	Idea Ref. No.	Incubatee Name	Title of the Idea
1	IDEATS005608	PARVATHAPURAMPAVA NKUMAR	ARTIFICIAL INTELLIGENCE FRAMEWORK FOR SKIN CANCER DETECTION AND CLASSIFICATION
2	IDEATS005756	DAYAPALLE NARESH KUMAR	WASTEWATERTREATMENTBYELECTRO-COAGULATIONUSINGIRON ELECTRODE

Idea Ref. No.	Project Cost	Amount Sanctioned	Incubatee Share
	(in Lakhs)		
IDEATS005608	11.998	10.198	1.800
IDEATS005756	12.000	10.200	1.800

## MSME 1.0

### Academic Year 2021-2022

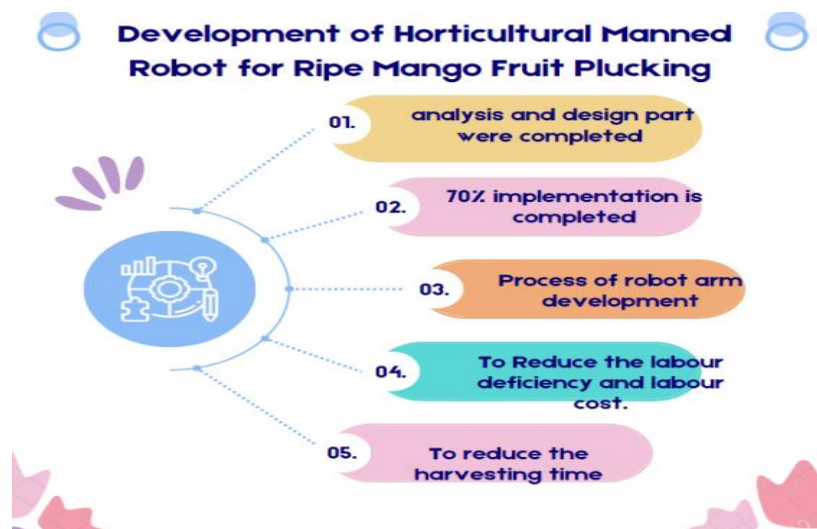
A total of 257 Proposals approved during 2<sup>nd</sup> PMAC Meeting of MSME Innovative Scheme held on 22.06.2022 & Announced by Hon'ble Prime Minister on the occasion of International MSME Day at Vigyan Bhawan on 30th June, 2022. Prototypes of these ideas are successfully completed.

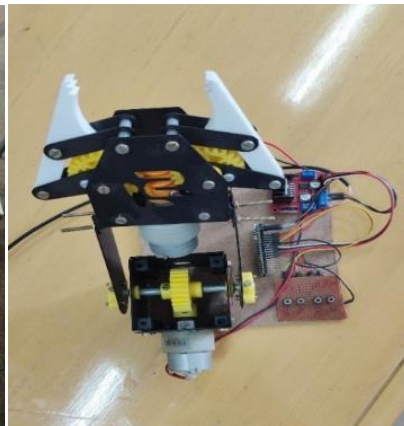
#### IN IDEA HACKATHON 1.0 of the year 2022:

- 44 ideas were submitted, with 28 successfully uploaded.  
 - Excitingly, three of our ideas have gained approval in the MSME IDEA HACKATHON 1.0. The approved titles and cost of projects include:

1. Economical design of a slab using HDPE balls
2. Plastic pavement blocks
3. Horticultural Manned Robot for Ripe Mango Fruit Plucking

#### Status of MSME Ideas-1





### Status of MSME Ideas-2

#### PLASTIC PAVEMENT BLOCKS

- 01 To replace cement with plastic waste in paver block
- 02 To reduce the cost of paver block when compared to that of convention concrete paver blocks.
- 03 By using recycled plastic, the demand for traditional raw materials like sand and stone can be reduced
- 04 It makes installation straightforward, and maintenance is generally easier compared to traditional pavement options
- 05 Used to design patterns and add visual interest to plazas and squares.

### Status of MSME Ideas-3

#### HDPE BALLS

- ◆ To practically use high density polyethylene balls in reinforced concrete slab
- ◆ Represents an innovative approach to building design and materials use.
- ◆ Helps in reducing heat absorption by the slab, especially in hot climates.
- ◆ Reducing the need for water-intensive cooling systems.
- ◆ Making the environment free from plastic waste.



## EVENTS:

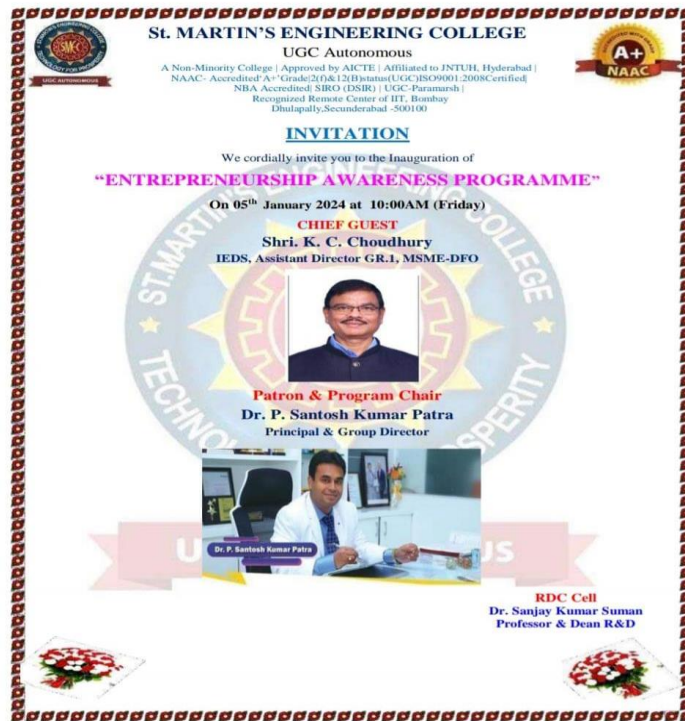
<b>SEMINAR</b>	<b>1</b>
<b>TECHNOVATION</b>	<b>1</b>
<b>EAP</b>	<b>1</b>
<b>WORKSHOP</b>	<b>1</b>
<b>International Conference</b>	<b>1</b>
<b>I&amp;E Training &amp; Exposure Visit</b>	<b>1</b>
<b>FDP</b>	<b>1</b>
<b>Doctorates Meet</b>	<b>4</b>

## EVENTS: ONE DAY ENTREPRENEURSHIP AWARENESS PROGRAMME (EAP)

### January 05<sup>rd</sup>, 2024: One Day Entrepreneurship Awareness Programme (EAP)

Ministry of Micro, Small & Medium Enterprises (MSME) has organized **ONE DAY ENTREPRENEURSHIP AWARENESS PROGRAMME (EAP)** in association with SMEC. SMEC has been associated with MSME for developing the **ENTREPRENEURSHIP** skills for the upcoming young Engineers.

The awareness program has been organized by MSME in association with SMEC on 05.01.2024. In event, speaker discussed about the importance of entrepreneurship and also conducted few games which make the students enthusiastic as well as awareness on Entrepreneurship.



They discussed about discussed about Self Employment Opportunities and MSME Schemes. SMEC has got approval of one core from MSME for establishing an incubation centre. In 2021-22, Three ideas from the institute has been short listed in the idea hackathon 1.0 organized by the MSME and got funding of Rs. 30 Lakhs. In 2022-23, Two ideas in the idea hackathon 2.0 and in 2023-24 Two ideas from the institute has been short listed in the idea hackathon 3.0 organized by the MSME.



Finally about various schemes such as Manufacturing sector, Automobile, Biotechnology, Defense of spare, Pharmaceutical Food processing factories, Railways etc.,

## EVENTS: TECHNOVATION-2024

### March 27, 2024: National Level Project Expo and Competition, TECHNOVATION-2024

St. Martin's Engineering College successfully conducted A National Level Innovation Competition, the project expo "TECHNOVATION-2024" on 27th March 2024 at college campus by connecting various colleges and allowed the students to showcase their talents. The specific objective of the TECHNOVATION-2024 is to provide a platform to present the innovative ideas and approaches in design, analysis, and development in all engineering disciplines. The Projects were evaluated by professionals from industry and eminent academicians.





This Technical fest enhances the practical aspects of real-world engineering applications. In order to encourage innovation, St. Martin's Engineering College has taken the initiation to reward talent. The Expo has been very much useful to students to understand and get exposed to the developments and trends in different engineering disciplines. The best projects were awarded attractive prizes and all the participants were offered participation certificates. The College Chairman Sri M Laxman Reddy Garu, Executive Director Sri.G.Chandrasekhar Yadav Garu and the Professor & Group Director, Dr.P.Santosh Kumar Patra sir visited the project expo and appreciated the participated students for exhibiting their innovative skills through their projects.



## **EVENTS: WORKSHOP**

### **May 2, 2024: Workshop on How to submit FDP proposals to ATAL**

A one day workshop on “How to Submit FDP Proposals to ATAL” was organized by the R&D Cell on 2<sup>nd</sup> of May, 2024 at St. Martin’s Engineering College, Dullapally, Secunderabad. We encourage all coordinators and co-coordinators of all department of St. Martin’s Engineering College to grab this opportunity to apply for ATAL faculty development programme. It is indeed a great support being provided by the AICTE Training and Learning (ATAL) Academy, Govt. of India.

The resource persons Dr. Sanjay Kumar Suman, Professor, Dean R&D delivered about the document preparation of ATAL proposal for submission. The other resource person Dr. Santhoshkumar, Associate Professor and HOD CSE delivered how to register in the ATAL websites and also applying procedures to all coordinators and co-coordinators. In this workshop , the agenda discussion are hoe to submit ATAL FDP proposal, What are all the document needs for submitting and FAQs related to submission procedures. In that day, all coordinator has informed to register and apply through login id and password at <https://atalacademy2.aicte-india.org/signup>. All department of our college had submitted two applications to ATAL FDP.



In this workshop, all coordinators and co-coordinators advised to submit maximum two proposals. In this all participants discussed about the submission related document such as Journals list, brochure, FDP dates and also about the resource persons of ATAL FDP.

## EVENTS: SEMINAR

### May 4, 2024: Seminar on Lifestyle Management

A one day seminar on “Lifestyle Management” was organized by the R&D Cell on 4<sup>th</sup> of May, 2024 at Swami Vivekanandha seminar hall, St. Martin’s Engineering College, Dullapally, Secunderabad.



The specific objective of this event is to present the style of life in day today life. The event is conducted to encourage the faculties and student to change the life of each and every person’s health. This event enhances the practical aspects of real-world products. In order to encourage life style management of all faculties, this event has been very

much useful to student and faculties to offer related treatments and therapies for particular diseases. A lifestyle management programme is an intervention designed to promote positive lifestyle and behavior change and is widely used in the field of health promotion.



The College Chairman Sri M Laxman Reddy Garu, Executive Director Sri.G.Chandrasekhar Yadav Garu and the Professor & Group Director, Dr.P.Santosh Kumar Patra sir appreciated the chief guest to enabling people to increase control over, and to improve, their health.

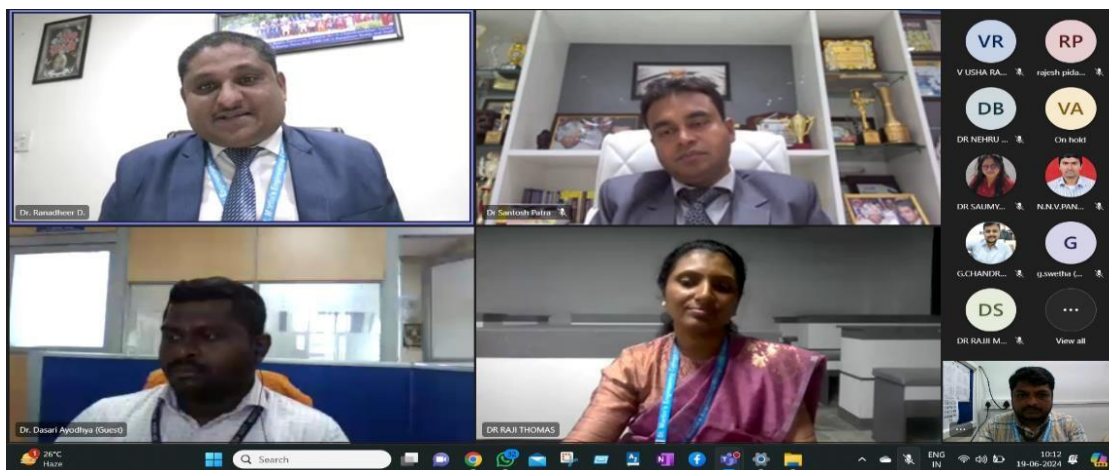


## EVENTS: INTERNATIONAL CONFERENCE-2024

### June 19<sup>th</sup>-20<sup>th</sup>, 2024: 5th Mega Online Two-Day International Conference titled “International Conference on Continuity, Consistency and Innovation in Applied Sciences and Humanities (ICCIASH-2024)”

The 5th Mega Online Two-Day International Conference titled “International Conference on Continuity, Consistency and Innovation in Applied Sciences and Humanities (ICCIASH-2024)” was organized by the Department of Freshmen Engineering, SMEC on 19/06/2024 & 20/06/2024.

The inaugural session was started at 11:00AM on Day-1 with the welcome address. Conference introductory address was delivered by the department head and convener of the conference, **Dr. D. Ranadheer Reddy**. In his speech, he thanked them management team and the group director sir for the encouragement and support for the FME department to organize the conference successfully for the fifth time within just 4 years. The introduction, schedule and significance of the conference were well elaborated by him. He also expressed his extreme delight for the tremendous response received from participants.



The inaugural session continued with the presidential address by **Dr. P. Santosh Kumar Patra**, Professor & Group Director, SMEC. With his mesmerizing speech and inspiring words, the participants were well motivated to grasp and share the knowledge through the conference. He also added that how the innovations and applications of the



Freshmen Engineering department create miracles through a set of examples: the multiple uses of Applied Physics Thermo Photo voltaic cell usage, significance of optical conveyor belt. The applications of Advanced Physics are used to conserve heat and the usage of gravity principles. He added that Chemistry is another subject that is widely used in Quality Food production process, clean water supply, and how to control the climatic change. He also inspired all the participants with the necessity of innovation.



Later, the Chief Guest **Dr.Dasari Ayodhya**, Assistant Controller of Patents & Designs, NIPAM Officer. Intellectual Property India, Patent Office, Chennai-600032, Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Government of India appreciated all the participants by emphasizing their essential involvement and participation. He guided on how to pursue the research work and academics successfully. He elaborated about the essential elements for filing patents. He added that the academic related tasks and research contributions must performed

The aim of the conference was to create opportunity to academicians, research scholars to present their research articles. Their articles also get published in reputed journals without any physical effort and hurdles by saving their precious time. The department of S&H at SMEC has taken the initiation by creating the online (Microsoft Teams) platform as well as Offline mode.

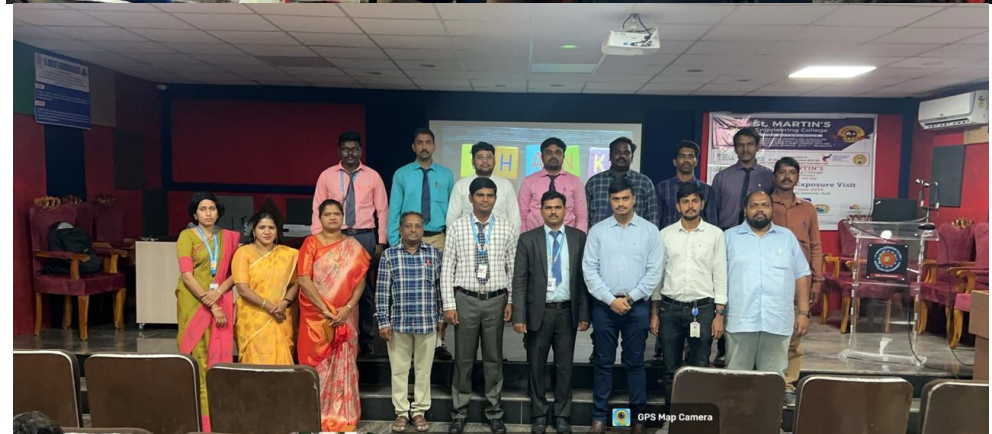
## EVENTS: I&E Training & Exposure Visit

### June 21<sup>st</sup> -22<sup>nd</sup> , 2024: I&E Training & Exposure Visit

The two day session on “I&E Training & Exposure Visit” was hosted by the SMEC IIC mentor-mentee scheme aiming to provide a common platform to all the mentee institute by different experts in the area of IPR, Patent filing and management, Innovation, IP & Entrepreneurship, Start-up services and policy mechanisms like ARIIA, NIRF, etc., and BFGF-Become Fundable to Get Funded.

This Programme was initiated with the great support of Patron& Program Chair **Dr. P. Santosh Kumar Patra**, Professor&Group Director, St. Martin’s Engineering College. During his address, sir emphasized the importance of IIC mentor-mentee scheme. This event was corresponded by the eminent keynote speakers Mr.SudheerVarma, Entrepreneur – Trainer &Startup Consultant, Hyderabad, India, Mr. PurushothamAdi, Founder & CEO Vyaparshaala, Director – ATPL, Hyderabad, India, Dr. VarlaBhanu Prakash Reddy, Partner & Director of Growth and Strategy, Plural Technology Pvt. Ltd., Hyderabad, India and Mr. Ravi Teja Gupta, Startup Seed Investor & Angel Investor, Hyderabad, India. Around 61 mentee institute coordinators and students from St. Martin’s Engineering College participated in the program.

The banner features the St. Martin's Engineering College logo at the top left, which includes the acronym 'SMC' and the motto 'TECHNOLOGY FOR PROFESSION'. To the right of the logo, the text reads 'St. MARTIN'S Engineering College UGC AUTONOMOUS'. Below this, it states 'A NON MINORITY COLLEGE, AFFILIATED TO JNTUH, APPROVED BY AICTE, ACCREDITED BY NBA & NAAC A- ISO 9001:2008 CERTIFIED' and 'SISO RECOGNITION BY MINISTRY OF SCIENCE & TECHNOLOGY, GOVT OF INDIA, Bhulapally, Near Kempally, Secunderabad - 508 100, T.S. www.smecc.ac.in'. A 'Proud Recipient of IIC Mentor Mentee Scheme (2023-24) with Funding support from MoE's Innovation Cell' badge is also present. The event title 'I&E Training & Exposure Visit' is prominently displayed, along with the dates 'on 21<sup>st</sup> & 22<sup>nd</sup> June 2024' and the venue 'Venue: Vivekananda Seminar Hall'. A list of resource persons includes Dr. Varla Bhanu Prakash Reddy, Mr. Sudheer Varma, Mr. Ravi Teja Gupta, and Mr. Ajay Jacob. At the bottom, logos of five mentee institutions are shown: Institute of Technology & Research, Institute of Engineering & Research, P.V. College for Women, Vizagapatnam, and VISHNU Institute of Technology, College of Pharmacy, AP.



Research is creating new knowledge.  
-Neil Armstrong

## EVENTS: Faculty Development Programme-2024

**June 26<sup>th</sup>-28<sup>th</sup>, 2024: Faculty Development Program**



### St. Martin's Engineering College

UGC Autonomous, Govt. of India  
NBA & NAAC A+ Accredited  
Dhulapally, Secunderabad, Telangana-500 100, INDIA



Research and Development Cell organizes  
A National Level Faculty Development Program on

## Research Pedagogy and Contemporary Research

(RPCR-2024)



**Dr. P. K. Nanda**  
Vice Chancellor  
SOA University  
Bhubaneswar, Odisha  
*Chief Guest*  
SESSION 1: RESEARCH NOTION AND PERCEPTION



**Dr. P. Santosh Kumar Patra**  
*Patron and Program Chair*  
Professor and Group Director  
St. Martin's Engineering College  
Secunderabad, Telangana  
*Presidential Address*



**Dr. Dhananjay Kumar**  
Professor and Former Head  
Dept. of IT  
Anna University  
MIT Campus, Chennai, TN  
*Guest of Honor*  
SESSION 9: CONTEMPORARY RESEARCH



**Dr. L. Bhagyalakshmi**  
Professor & Head  
Dept. of ECE  
REC, Chennai, TN  
SESSION 2: RESEARCH PEDAGOGY



**Dr. Satyanand Singh**  
Associate Professor  
School of Electrical Engg., FNU, FIJI  
SESSION 3: BIBLIOMETRICS ANALYSIS



**Dr. Vandana Roy**  
Professor  
Dept. of ECE, GGITS  
Jabalpur, MP  
SESSION 4: PAPER WRITING



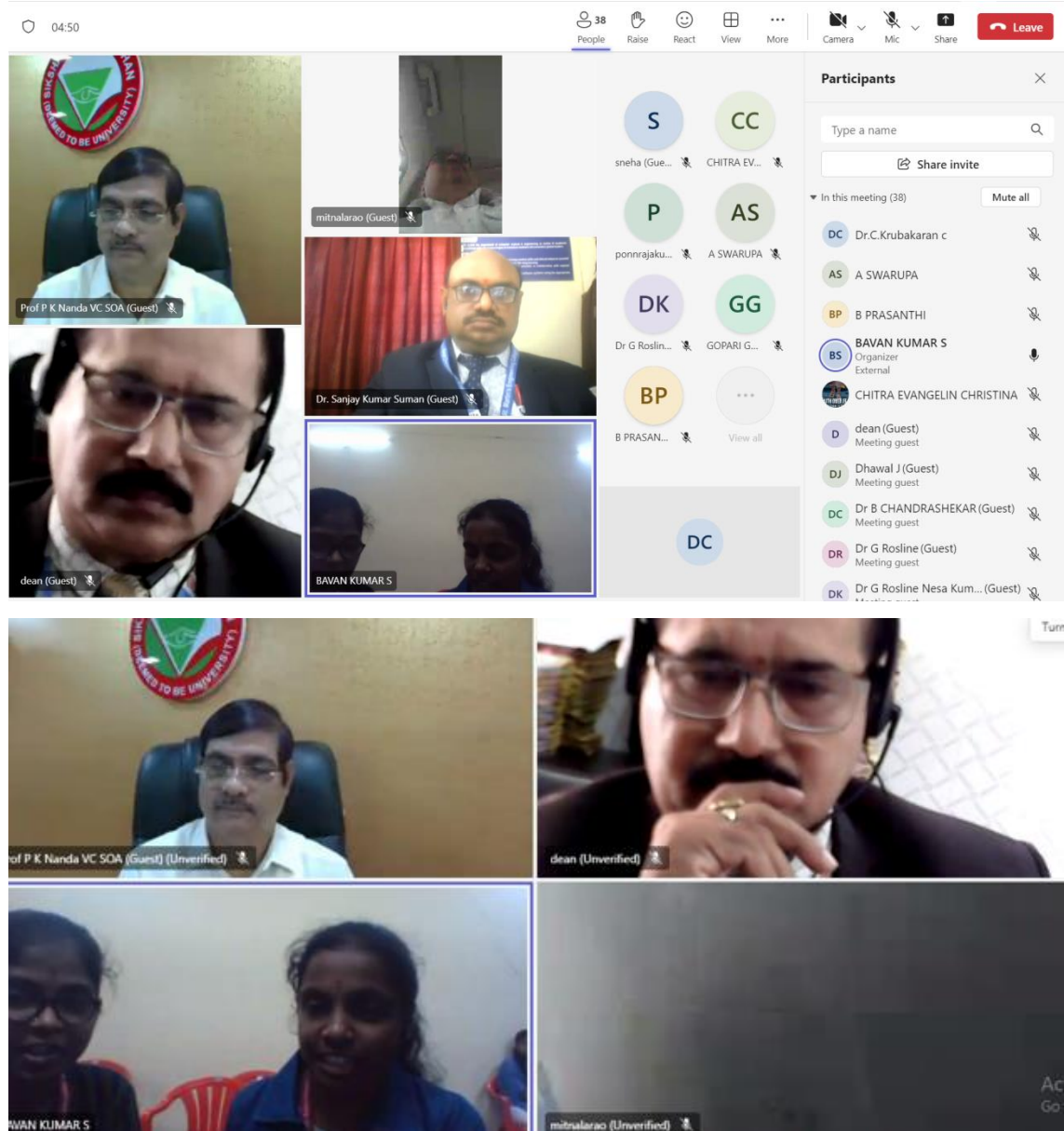
**Dr. S. Neeraja**  
Associate Professor  
Dept. of ECE, GITAM  
Visakhapatnam, AP  
SESSION 5 & 6: RESEARCH PROPOSAL FOR FUNDED PROJECTS

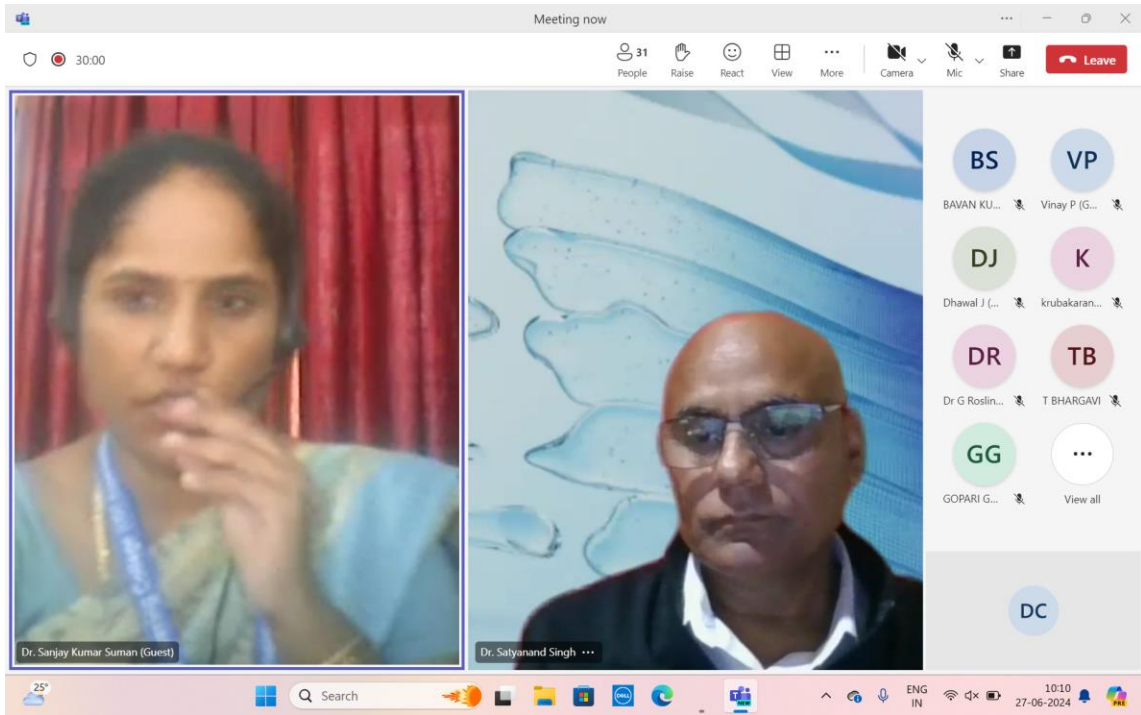


**Dr. Gunamani Jena**  
Director, RIT  
Berhampur  
Odisha  
SESSION 7 & 8: LATEX WRITING: HANDS ON TRAINING

The Research and Development Cell of SMEC had organized a FDP on Research Pedagogy and Contemporary Research from **26-06-2024 to 28-06-2024**. More than 100 participants has participated in online FDP including SMEC faculty members. This program was directed into 9 sessions. In each session; eminent resource persons had fervidly apportioned their knowledge and information. All these sessions were equally star studded with eminent resource persons from premier institutions. This FDP was aimed to provide a comprehensive information on research progress such as:

research notion and perception, how to write project for funded agency, how to start the research once a scholar joins in Ph.D, paper writing skill for journal and providing hands-on experience on LATEX Writing , thereby enhancing the skills of faculty. Each session is enriched with the well experienced resource persons who have great skill set in all the parameters of R&D methodology. The following topics are focused in the FDP: Research Notion & Perception, Research Proposal and funding projects, Research Pedagogy, Writing Research article for journal, Latex writing: hands on training, and Bibliometrics Analysis





**“The best research you can do is talk to people”**

## Research Review Meet:

**Fortnight Meeting and Monthly:** There are two meeting for all doctorates and department coordinators are conducted in a month under the chairmanship of one department head or dean assigned by Group Director. Chairperson takes the progress update of all doctorates, invites doctorates to participate and discuss on cutting edge technological development in world and delivers his ideas/thought as a seminar presentation. The content of discussion is recorded in Research Forum News Letter which is published twice in an academic year.

**June 29, 2024**

In this academic year 2023-2024, Our Group Director Dr. P. Santosh Kumar Patra honored our doctorates meeting on **June 29<sup>th</sup> 2024** and delivered the speech about the importance of Research paper publication for Doctorates and Non Doctorates faculty members.



Our Group Director Sir reviewed the progress of all departments for the Academic year 2023-24. The department R&D coordinators presented the progress of this year publications and compared with last year publication data. Our Group Director made a talk on upcoming events and publications. He motivated the faculties to do the

funding and consultancy projects in next academic year of 2024-25. All participants are encouraged to attend and present in the external conference to the other colleges. All departments HOD, Doctorates and R&D coordinator are participated and made this meeting as grand success.

**January 29, 2024: Dr. D.V. Sreekanth, Dean Administration and HOD-Mech,** has encouraged all female faculties to submit ideas in MSME. He discussed about the how many proposals are selected in MSME 3.0 in the last three years. He elaborated the status of MSME funded projects. He motivated the faculties to develop more ideas for upcoming government funding proposals.



**February 15, 2024: Dr. Sanjay Kumar Suman, R&D Dean** ,has reviewed the progress of the doctorates and delivered a talk on IPR awareness and patent writing. He has also suggested to submit for patents from all departments and informed to concentrate more on writing patents and to improve quality of writing patent.

**February 29, 2024: Dr. SVS RamaKrishnam Raju, Dean Academic** has reviewed the progress of the doctorates. He explained about the importance of research and publications for the women faculties. He also discussed about opportunities for women funding proposal and informed all woman doctorates faculties to concentrate to apply for funding proposals.



*Research is to see what everybody else has seen, and to think what nobody else has thought.*

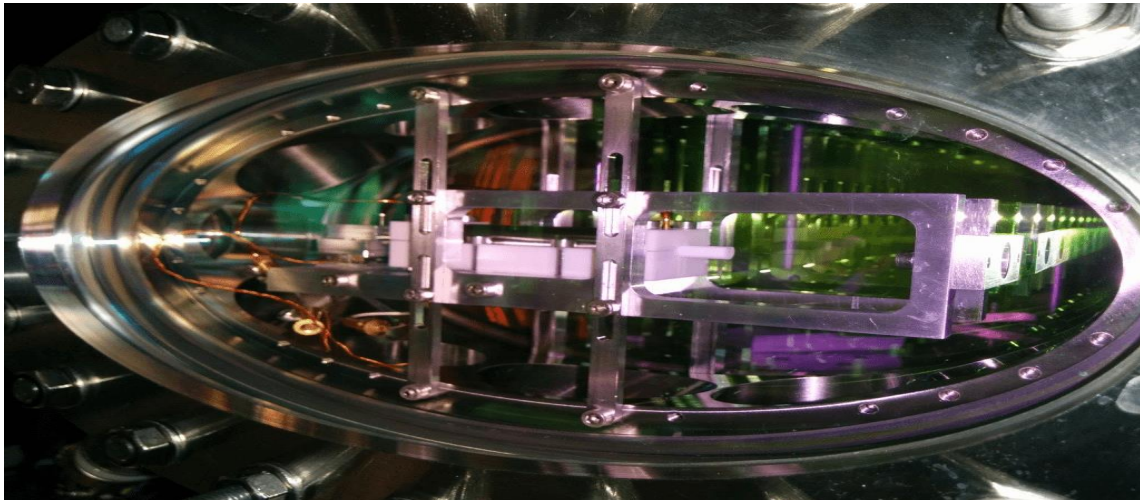
*—Albert Szent-Gyorgyi*



## **OPTICAL CONVEYOR BELT**

**Dr. P. Santosh Kumar Patra, Group Director of St. Martin's Engineering College**

The theoretical branch of the field of ultracold atoms is completely interdisciplinary, attracting top scientists from atomic, condensed matter, high energy and nuclear physics, as well as from quantum optics and quantum information. A practical technique that can quickly and efficiently transport ultracold atoms into a hollow fiber has been created by Patrick Windpassinger and colleagues at Johannes Gutenberg University Mainz in Germany. The technique involves allowing the atoms to ride on an “optical conveyor belt” created by two laser beams. Once inside the optical fiber, the atoms could be used in a wide range of applications, including quantum computing and sensing.



Ultracold atoms are atoms that are maintained at temperatures close to 0 kelvin (absolute zero), typically below temperatures of some tenths of microkelvins ( $\mu\text{K}$ ). At these temperatures the atom's quantum-mechanical properties become important. To reach such low temperatures, a combination of several techniques has to be used. First, atoms are usually trapped and pre-cooled via laser cooling in a magneto-optical trap (MOT). To reach the lowest possible temperature, further cooling is performed using evaporative cooling in a magnetic or optical trap.

Laser diodes are used for many of the standard MOT's. By employing a 2-dimensional diffraction grating it is possible to generate the configuration of laser beams

required for a magneto-optical trap from a single laser beam and thus have a very compact magneto-optical trap. The laser beam therefore needs to be accurate, the lens required must be constructed with the highest clarity available. The engineers at Universe Optics will work with you to ensure that the precision lens required will meet your specifications.

Over the past few decades, ensembles of ultracold atoms have proved incredibly useful for applications such as simulating quantum states of matter, measuring tiny forces and storing and processing quantum information. Since many applications involve laser lights to interact with atoms, physicists are working hard to make this interaction as precise as possible. This can be done by confining a cloud of ultracold atoms within a hollow fiber before firing the appropriate laser light into the fiber. However, getting the atoms into a fiber without heating them up, or losing most of them is a big challenge.

To accomplish this, the atoms need to fall under gravity into a fiber or by using a “magnetic funnel”. Another is the optical conveyor belt, which was first demonstrated in 2014 at the University of Tokyo by Hidetoshi Katori and colleagues. A key benefit of this technique, according to Windpassinger and colleagues, is that the atoms can be transported and positioned with great precision. However, doing so without losing lots of atoms or without heating the atoms remain important goals.

Windpassinger and colleagues have built and characterized an optical conveyor system and shown that atoms can be transported in relatively large numbers while keeping them ultracold. It involves first trapping and cooling of a cloud of rubidium-87 atoms in a magneto-optical trap (MOT). The atoms are initially held about 6 mm from the end of a fiber that is 10 cm long with a hollow core of diameter 60  $\mu\text{m}$ . The field of quantum gases or ultracold atoms is the fastest expanding, and most interdisciplinary field in physics today. The experimental branch of this exciting new field uses the techniques of atomic, molecular and optical physics to study many-body systems consisting of extremely cold-trapped atoms. These are condensed matter systems whose constituents have well-understood microscopic interactions. At sufficiently low temperatures, the large de Broglie wavelengths of the atoms allow these systems to exhibit quantum phenomena on a macroscopic scale.

“There is no innovation and creativity without failure.”

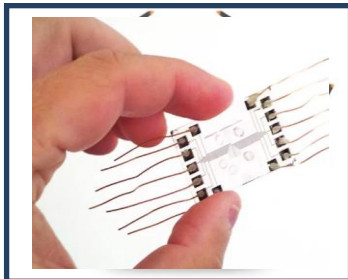
—Brene Brown

### SOLAR PANEL



Solar Panel (PV), the 'carbon-free' technology that converts sunlight directly into electricity, has grown rapidly in a few years. Unique among renewable energies in its interaction with the built environment, Solar panels are becoming part of the daily experience of consumers in developed countries as millions of solar panels are installed on rooftops and building facades. People living in sunshine countries will increasingly live in solar homes or receive their electricity from large solar power plants. Many governments around the world are keen to promote renewable electricity as an essential part of the 21st century's energy mix, and solar power is set for an exciting future.

### SMART WATER CHIP



The cost of clean water is a major obstacle for many thirsty people on Earth, so researchers look for affordable solutions for small scale, personal water purification. In 2014, a joint research team from the University of Texas at Austin and the University of Marburg in Germany developed a low-drain "water chip" which generates a small electrical field to desalinate seawater. Early in its development, the water chip promised to offer a portable clean water solution capable of running on a regular battery. The startup Okeanos Technology was founded to further the product's research and development, which is still underway.

As a research tool, the internet is invaluable.

- Noam Chomsky

## Gallery





Hyderabad, Telangana, India  
 ADMISSION BLOCK, ST. MARTINS ENGINEERING COLLEGE OF  
 TECHNOLOGY, Kompally, Kaziguda, Hyderabad, Telangana 500100, India  
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 Hyderabad, Telangana 500014, Kompally, Hyderabad, Kaziguda, Telangana  
 500100, India  
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**GPS Map Camera**  
Hyderabad, Telangana, India  
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Hyderabad, Telangana 500014, Kompally, Hyderabad, Kaziguda, Telangana  
500100, India  
Lat 17.541494°  
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**GPS Map Camera**  
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ADMISSION BLOCK, ST. MARTINS ENGINEERING COLLEGE OF TECHNOLOGY,  
Kompally, Kaziguda, Hyderabad, Telangana 500100, India  
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Hyderabad, Telangana, India  
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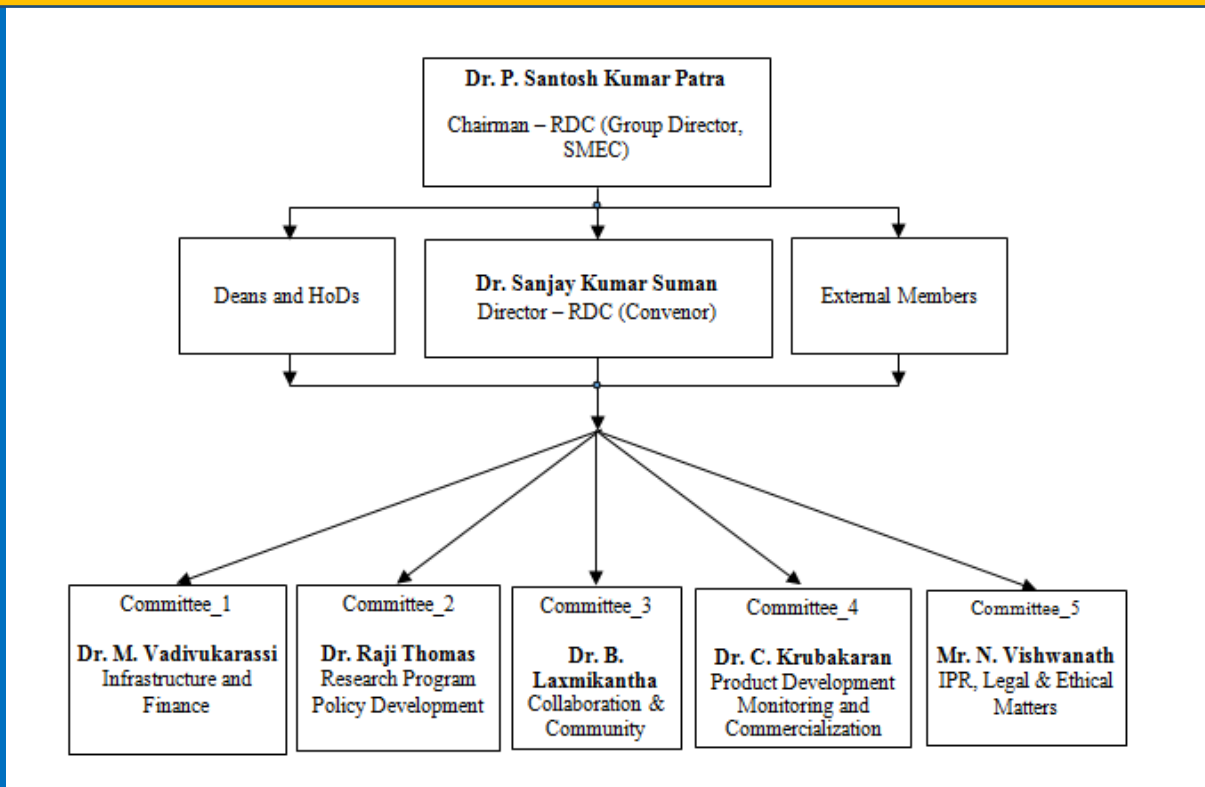


**“No research without action, no action without research”**

*- Kurt Lewin*



# ORGANISATIONAL STRUCTURE OF RDC



## Team RDC



**Dr. Sanjay Kumar Suman**  
Dean R&D



**Dr. M. Vadivukarassi**  
Coordinator: Dept. of CSE



**Dr. B. Laxmikantha**  
Coordinator: Dept. of IT



**Dr. Raji Thomas**  
Coordinator: Dept. of FME



**Mr. N. V. Viswanath**  
Coordinator: Dept. of ECE



**Mrs. K. Anusha**  
Coordinator: Dept. of EEE



**Dr. C. Krubakaran**  
Coordinator: Dept. of AIDS



**Mrs. CH. Kalyani**  
Coordinator: Dept. of CE



**Dr. B. Chandrashekar**  
Coordinator: Dept. of CSD



**Mrs. C. Ushapriya**  
Coordinator: Dept. of AIML



**Ms. K. Archana**  
Coordinator: Dept. of ME



**Mr. R. Karthikeyan**  
Coordinator: Dept. of CSM

**“Research is formalized curiosity. It is poking and prying with a purpose” - Zora Neale Hurston**

## ■ సెయింట్ మార్టిన్ లో టెక్నో వేషన్-24 ఎక్స్ పో



దూలపల్లి సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాలలో పలు కళాశాలలను కలుపుకొని జాతీయ స్థాయి ఆవిష్కరణ పోటీలో భాగంగా టెక్నోవేషన్-2024 ప్రాజెక్ట్ ఎక్స్ పో నిర్వహించారు. ఈ వేడుకలను కళాశాల చైర్మన్ మురి లక్ష్మణారెడ్డి, ఎగ్జిక్యూటివ్ డైరెక్టర్ జి.చంద్రశేఖరయ్యారమ్, గ్రూప్ డైరెక్టర్ ప్రిన్సిపాల్ డా.పి.సంతోష్ కుమార్ పాత్ర ప్రారంభించారు. ఈ సందర్భంగా వారు మాట్లాడుతూ.. జాతీయ, అంతర్జాతీయ స్థాయిలో వివిధ రంగాల్లో వస్తున్న మార్పులను స్థానిక విద్యార్థులకు తెలియపర్చేందుకు ఇలాంటి వేడుకలు ఎంతగానో అవసరమన్నారు. విద్యార్థులు ఇలాంటి వాటిని సద్వినియోగం చేసుకొని పరిశోధనలపై మరింత పరిశీలనలు చేయాలని కోరారు. ఈ కార్యక్రమంలో అధ్యాపక బృందం, విద్యార్థులు పాల్గొన్నారు. - శుక్కుల్పూర్, మార్చి 28

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## పాలిశ్రామికరంగం వైపు ఆలోచనలు చెయ్యాలి



### అవగాహన సదస్సులో మాట్లాడుతున్న పలువురు వక్తలు

కుక్కుల్పూర్, జనవరి 6: విద్యార్థులు పారిశ్రామిక రంగం వైపు ఆలోచన చేసి సమాజంలో ఉపాధి అవకాశాలను కల్పించే స్థాయికి ఎదగాలని దూలపల్లి సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల చైర్మన్ మురి లక్ష్మణారెడ్డి అన్నారు. సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల దూలపల్లిలో జరిగిన యువత బావి పారిశ్రామికవేత్తలు అనే అంశంపై ఒక్కరోజు అవగాహన సదస్సులో ఎంఎస్ఎంఈ, కేవీఐసీ, డీఐసీ, ఎస్ఐఐలకు చెందిన పలువురు వక్తలు హాజరై తమ సందేశాన్ని విద్యార్థులకు అందించారు. ఈ కార్యక్రమంలో కళాశాల ప్రిన్సిపాల్ డా.పి.సంతోష్ కుమార్ పాత్ర, వక్తలు ఆర్ కె యాదవ్, సుధీర్ వర్మ, పి.శ్రీనివాసరెడ్డి, కళాశాల డైరెక్టర్ జి.చంద్రశేఖరయ్యారమ్ పాల్గొన్నారు.

07/01/2024 | Hyderabad | Page : 6  
Source: <https://enaper.npsnews.com/>



## St Martin's Engineering College signs an MoU

St Martin's Engineering College is rewriting the history in technical education by signing an MoU with Victoria University, Australia. The motto of the college is to create opportunities for its students universally.

### ఆంధ్రజ్యోతి

## సెయింట్ మార్టిన్ కాలేజీకి అంతర్జాతీయ అవార్డు



అవార్డు అందుకుంటున్న కళాశాల చైర్మన్ మురి లక్ష్మణారెడ్డి

అల్వోల్, అక్టోబర్ 4 (ఆంధ్రజ్యోతి): గత రెండేళ్లుగా సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల విద్యార్థులకు 100 శాతం షైప్ మెంట్ కలిగిస్తుంది. విద్యార్థులకు అవర్ లేటర్ ను అందించే విషయంలో సెయింట్ మార్టిన్ ఇంజనీరింగ్ కళాశాల క్రమం తప్పకుండా నిర్వహించే ఈవెంట్ లు, షైప్ మెంట్ లో ఉత్తీర్ణులైన విద్యార్థులందరూ వారి జాబ్ అవర్ తో అపాయింట్ మెంట్ లేటర్ ను అందుకున్నారు. ఈ అర్బిమ్ మెంట్ కారణంగా వరల్డ్ ఎయ్యుకేషన్ సమ్మిట్ 'అత్యుత్తమ షైప్ మెంట్ లో పాటు అత్యుత్తమ సంస్థ' అనే అవార్డును మరే ఏ యాల్ నిర్వహించిన కార్యక్రమంలో కళాశాల చైర్మన్ మురి లక్ష్మణారెడ్డి, ఎగ్జి

# UPCOMING EVENT: International Conference on 8<sup>th</sup> & 9<sup>th</sup> November 2024.

<p><b>3<sup>rd</sup> International Conference on "Innovation and Recent Trends in Computer Science"</b></p> <p>ICRCS-24 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Computer Science and Engineering</p>	<p><b>4<sup>th</sup> International Conference on Recent Innovation in Computer Engineering and Information Technology</b></p> <p>ICRCEIT-24 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Information Technology, St. Martin's Engineering College</p>	<p><b>5<sup>th</sup> International Conference on "Smart Modemetic in Electronics and Communication"</b></p> <p>ICSMEC-24 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Electronics and Communication Engineering, St. Martin's Engineering College</p>	<p><b>Fourth International Conference on "Advances in Electrical and Electronics Engineering" (ICALEE - 2024)</b></p> <p>8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Electrical and Electronics Engineering, St. Martin's Engineering College</p>	<p><b>4<sup>th</sup> International Conference on Recent Advances in Mechanical Engineering</b></p> <p>ICRAME-24 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Mechanical Engineering, St. Martin's Engineering College</p>	<p><b>4<sup>th</sup> International Conference on "Revolutionary Technology in Civil Engineering"</b></p> <p>ICRCTCE-2024 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Civil Engineering, St. Martin's Engineering College</p>	<p><b>3<sup>rd</sup> International Conference on "Innovation and Emerging Trends in Artificial Intelligence and Machine Learning Applications"</b></p> <p>ICRTAIML -24 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of Computer Science and Engineering (CSE &amp; ML)</p>	<p><b>International Conference on Recent Trends in AI-driven Data Analysis, Machine Learning and Computational Design</b></p> <p>ICRTADML-2024 8<sup>th</sup> &amp; 9<sup>th</sup> November, 2024</p> <p>Organized by Department of AISEN, AIAML and CID, St. Martin's Engineering College</p>
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