**Report on One Week FDP on**
**"Research Paper Writing, Proposal Drafting, and Patenting Strategies"**
**Organized by**
**Department of Computer Science & Technology**
**22.05.2023 to 27.05.2023**

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**INTRODUCTION:**

The One-week Online Faculty Development Programme (FDP) on "Research Paper Writing, Proposal Drafting, and Patenting Strategies" was organized by the Department of Computer Science & Technology. The program aimed to enhance the skills and knowledge of faculty members, research scholars, and industry professionals in patent drafting, patent filing, research proposal writing, and research paper writing. The FDP consisted of expert lectures, interactive sessions, and practical exercises to provide participants with a comprehensive understanding of these important aspects.

**DAY 1 - INAUGURAL FUNCTION:**

**Attendance: 140 participants (External)**

The first day of the FDP, held on 22nd May 2023, began with an inaugural function to set the tone for the program. The following sessions were conducted:

**1. Welcome Address:** Dr. S. Shanthi, SAP/CST/MITS, delivered the welcome address, extending a warm welcome to the participants and setting the context for the FDP.
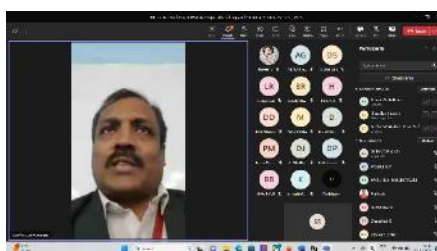


**2. Opening Note and Introduction to FDP:** Dr. M. Sreedevi, HOD/CST, provided an opening note, highlighting the importance of research paper writing, proposal drafting, and patenting strategies in academic and industry settings. She introduced the objectives and scope of the FDP, emphasizing the significance of enhancing these skills for the participants' professional growth.

**3. Special Address:**

Dr. P. Ramanathan, Vice Principal – Academics, delivered a special address, providing insights into the value of the FDP and how it aligns with the institution's vision and goals. He emphasized the importance of research and innovation in the field of computer science and technology.



**4. Introduction to Resource Person:**

Mr. Serin V Simpson, Assistant Professor/CST MITS, introduced the resource person for the day's sessions, Dr. A. Balaji Ganesh. He provided a brief background of the resource person, highlighting their expertise in patent drafting and intellectual property rights (IPR).

**5. Session 1 - Essentials of IPR for a Startup Perspective Emphasizes on Idea into Patent:**

Dr. A. Balaji Ganesh, PhD., Dean (Research), Velammal Engineering College, Chennai, conducted the first session. This session focused on providing an overview of intellectual property rights, with a specific emphasis on the importance of IPR for startups. The contents covered in this session include:



- Understanding the basics of intellectual property and its significance in the startup ecosystem.
- Exploring different types of intellectual property, such as patents, copyrights, trademarks, and trade secrets.
- Discussing the process of converting an idea into a patentable invention.
- Highlighting the benefits and challenges of patenting for startups.
- Providing insights into patent filing procedures and the importance of conducting a prior art search.
- Explaining the role of patents in protecting inventions, attracting investments, and gaining a competitive edge in the market.

**6. Session 2 - Patentability Aspects Analysis (Search Strategies):**

In the evening session, Dr. A. Balaji Ganesh continued with the topic of patentability aspects analysis and search strategies. The contents covered in this session include:
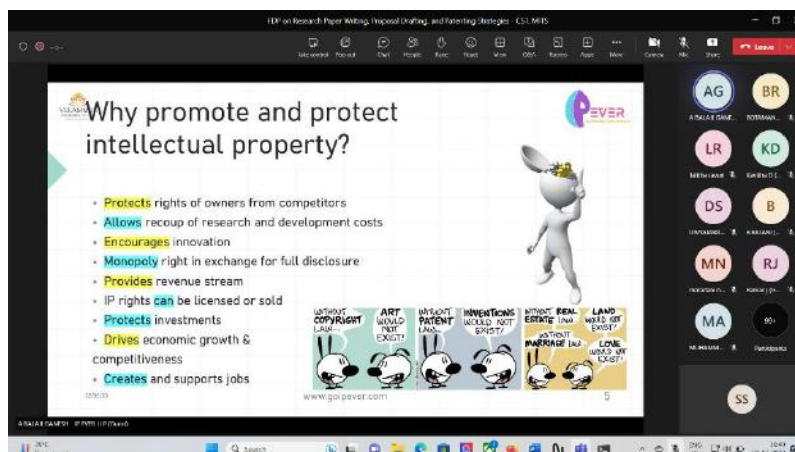


**DAY 2 - PATENTABILITY ASPECTS ANALYSIS AND SEARCH STRATEGIES:** Attendance: 140 participants (External)

The second day of the FDP, held on 23rd May 2023, focused on patentability aspects analysis and search strategies. The sessions were conducted by Dr. A. Balaji Ganesh, PhD., Dean (Research) at Velammal Engineering College, Chennai. The following contents have been covered in the sessions:

**Session 1 - Patentability Aspects Analysis (Continued):**

Building upon the previous day's session, Dr. A. Balaji Ganesh further explored patentability aspects and their analysis. The contents covered in this session include:

- Revisiting the criteria for patentability, such as novelty, inventive step, and industrial applicability.
- Exploring case studies and examples to illustrate the concept of patentability aspects analysis.
- Discussing the importance of conducting a thorough analysis to determine the patentability of an invention.
- Addressing common challenges and pitfalls in assessing patentability.
- Providing guidance on evaluating prior art references and determining their impact on patentability.



### Session 2 - Search Strategies for Patent Analysis:

This session focused on effective search strategies for patent analysis. The contents covered in this session include:

- Exploring advanced search techniques to retrieve relevant patent documents.
- Discussing different search parameters and syntax to refine patent searches.
- Introducing specialized patent search databases and tools for in-depth analysis.
- Highlighting the importance of classification systems and patent data mining in search strategies.
- Providing insights into analysing and interpreting patent documents to extract valuable information.
- Demonstrating practical examples and case studies to enhance participants' understanding of patent search strategies.

By the end of Day 2, participants would have gained a deeper understanding of patentability aspects analysis and developed practical skills in conducting effective patent searches. They would have been equipped with valuable knowledge to evaluate the patentability of inventions and navigate the complexities of patent literature.

### DAY 3 - PATENT FILING PROCEDURES AND IMPORTANT PATENT OFFICE PROCEDURES: Attendance: 140 participants External.

The third day of the FDP, held on 24th May 2023, focused on patent filing procedures and important patent office procedures. The sessions were conducted by Dr. A. Balaji Ganesh, PhD., Dean (Research) at Velammal Engineering College, Chennai. The following contents have been covered in the sessions:

### Session 1 - Patent Filing Procedures, Including Provisional and Complete Specification Drafting:
This session delved into the process of patent filing, including the drafting of provisional and complete specifications. The contents covered in this session include:

- Understanding the significance of provisional and complete specifications in the patent filing process.
- Explaining the requirements and structure of a provisional specification.
- Discussing the elements and formatting guidelines for drafting a complete specification.
- Addressing common challenges and pitfalls in drafting specifications.
- Providing insights into the role of claims, drawings, and abstracts in patent applications.
- Offering practical tips for effective specification drafting and patent filing.

### Session 2 - Important Patent Office Procedures, Including Patent Acts and Rules:
This session focused on essential patent office procedures, including an overview of patent acts and rules. The contents covered in this session include:

- Introducing participants to the patent system, its legal framework, and regulatory authorities.
- Discussing the roles and responsibilities of patent offices in the patent application process.
- Exploring the key provisions and sections of patent acts and rules.
- Addressing the requirements and formalities involved in patent filing, examination, and prosecution.
- Highlighting the timelines, fees, and documentation needed during different stages of the patent process.
- Providing guidance on responding to office actions and overcoming objections raised by patent examiners.
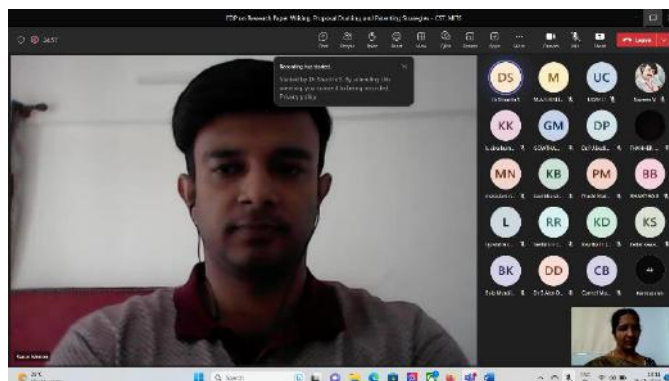
By the end of Day 3, participants would have gained a comprehensive understanding of patent filing procedures, including the drafting of provisional and complete specifications. They would also have become familiar with important patent office procedures and the legal aspects of the patent system.

**DAY 4 - RESEARCH PAPER WRITING: Attendance: 140 participants (External)**

The fourth day of the FDP, held on 25th May 2023, focused on research paper writing. The sessions were conducted by Dr. Varun G Menon, Professor, International Collaborations & Corporate Relations -in charge, Head, Department of Computer Science and Engineering, SCMS School of Engineering and Technology, Ernakulam, Kerala. The following contents have been covered in the sessions:

### Introduction to Resource Person:

Mr. V. Naveen, AP/CST/MITS, introduced the resource person for the day's sessions, Dr. Varun G Menon. He provided a brief background of the resource person, highlighting their expertise in research paper writing and academic publishing.



### Session 1 - Research Paper Writing:
This session focused on the fundamentals of research paper writing. The contents covered in this session include:

• Understanding the purpose and importance of research papers in academia.
• Exploring the structure and components of a research paper, including the abstract, introduction, methodology, results, discussion, and conclusion.
• Discussing strategies for selecting a research topic and formulating research questions or objectives.
• Addressing the ethical considerations and best practices in research paper writing.
• Providing guidance on conducting literature reviews, data analysis, and presenting research findings effectively.
• Highlighting the importance of proper referencing and citation styles in research papers.

### Session 2 - Research Paper Writing (Continued):
The second session of the day continued the focus on research paper writing. The contents covered in this session include:

• Discussing strategies for organizing and presenting research data, tables, figures, and illustrations.
• Exploring techniques for writing clear, concise, and coherent research paper sections.
• Addressing common challenges in academic writing and offering tips for improving clarity and readability.
• Providing insights into the peer-review process and tips for responding to reviewer comments.
• Highlighting the significance of impactful titles and abstracts in research papers.
• Offering guidance on selecting appropriate journals and understanding submission guidelines.

By the end of Day 4, participants would have gained valuable insights into the process of research paper writing. They would have developed a strong foundation in structuring and presenting their research findings effectively, which would enhance their ability to contribute to scholarly publications and disseminate their research in the academic community.

### DAY 5 - RESEARCH PROPOSAL WRITING:

### Attendance: 140 participants (External)

The fifth day of the FDP, held on 26th May 2023, focused on research proposal writing. The sessions were conducted by Dr. Mainak Adhikari, Assistant Professor, Department of Computer Science, IIIT Lucknow. The following contents have been covered in the sessions:
### Introduction to Resource Person:

Dr. S. Shanthi, SAP/CST/MITS, introduced the resource person for the day's sessions, Dr. Mainak Adhikari. She provided a brief background of the resource person, highlighting their expertise in research proposal writing and research project management.

### Session 1 - Research Proposal Writing:

This session focused on the essentials of research proposal writing. The contents covered in this session include:

• Understanding the purpose and importance of research proposals in securing funding and initiating research projects.
• Discussing the components and structure of a research proposal, including the introduction, literature review, research objectives, methodology, timeline, and expected outcomes.
• Exploring different types of research proposals, such as academic proposals, grant proposals, and industry proposals.

- Addressing the key elements of a persuasive and well-structured research proposal.
- Providing guidance on formulating research questions, hypotheses, and research methodologies.
- Highlighting the significance of budget planning and resource allocation in research proposals.

**Session 2 - Research Proposal Writing (Continued):**

The second session of the day continued the focus on research proposal writing. The contents covered in this session include:

- Discussing strategies for conducting a comprehensive literature review and identifying research gaps.
- Addressing ethical considerations and research ethics statements in research proposals.
- Exploring techniques for effectively communicating the research methodology, data collection, and analysis plans.
- Offering tips for writing clear, concise, and compelling project descriptions and expected outcomes.
- Highlighting the importance of aligning research proposals with funding agency guidelines and evaluation criteria.
- Providing insights into successful proposal submission and evaluation processes.

**DAY 6 - ADVANCED TOPICS IN RESEARCH PROPOSAL WRITING:**

**Attendance: 140 participants (External)**

The sixth and final day of the FDP, held on 27th May 2023, focused on advanced topics in research proposal writing. The sessions were again conducted by Dr. Mainak Adhikari, Assistant Professor, Department of Computer Science, IIIT Lucknow. The following contents have been covered in the sessions:

**Session 1 - Advanced Research Proposal Writing Techniques:**

This session delved deeper into advanced techniques and strategies for writing research proposals. The contents covered in this session include:

- Exploring advanced methods for conducting literature reviews, including systematic reviews and meta-analyses.
- Discussing techniques for formulating research hypotheses and developing a strong conceptual framework.
- Addressing the inclusion of theoretical frameworks, models, or methodologies in research proposals.
- Exploring innovative and interdisciplinary approaches to research proposal writing.
- Providing guidance on incorporating stakeholder engagement and societal impact considerations.
- Highlighting the importance of addressing potential limitations and risks in research proposals.

**Session 2 - Funding Opportunities and Grant Proposal Writing:**

The second session of the day focused on funding opportunities and grant proposal writing. The contents covered in this session include:

- Introducing participants to different funding agencies, both national and international, that support research in their respective fields.
- Discussing the criteria, eligibility, and evaluation process for different funding programs.
- Exploring the components and structure of a grant proposal, including the significance of the research, expected outcomes, budget, and impact assessment.
- Addressing the role of collaboration, partnerships, and project management in grant proposal writing.
- Providing insights into successful grant proposal submission and post-award management.
- Offering tips for developing a compelling narrative and effectively justifying the need for funding.

**Feedback Session:**

Following the research proposal writing sessions, a feedback session was conducted to allow participants to share their proposals and receive constructive feedback from the resource person and fellow participants. This session provided an opportunity for collaborative learning, idea exchange, and improvement of research proposals.

**Valedictory and Vote of Thanks:**

The FDP concluded with a valedictory session, where Mr. V. Naveen, AP/CST/MITS, delivered the vote of thanks. This session acknowledged the efforts of the resource person, participants, and organizers in making the FDP a success.

By the end of Day 6, participants would have gained valuable insights into the process of research proposal writing. They would have learned how to develop a strong research proposal, align it with funding agency requirements, and effectively communicate their research objectives and methodologies.