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### DEPARTMENT OF MECHANICAL ENGINEERING

### DEPARTMENT INNOVATION AND RESEARCH COMMITTEE

A committee has been constituted under the Mechanical Engineering Department of this college on June 6, 2018, at 01:00 p.m. This committee, known as the Department Committee for the Centre for Innovation in Computational Mechanics and Advanced Materials (CICMAM), comprises the following esteemed members - Prof. Jayasree S (HOD ME), Prof. Dr. Binu P. P (ME) and Assoc. Prof. Rajesh Kumar R (ME). The primary objective of the committee is to oversee and advance the goals and policies of CICMAM, aiming to contribute to the advancement of science, technology, and society through research, innovation, and education. This committee marks a significant step toward realizing CICMAM's mission, aligning with the department's vision for innovation and excellence.



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# CENTRE OF INNOVATION IN COMPUTATIONAL MECHANICS AND ADVANCED MATERIALS (CICMAM)

### 1) Objectives:

- The primary objective of CICMAM is to generate new knowledge and insights that contribute to the advancement of science, technology, and society.
- To do thorough, organised research that adheres to ethical standards and sound technique.
- To provide academic faculty and students with the most up-to-date computing equipment's for high-performance computing and precise modelling of both large- and small-scale systems.
- To foster a research culture among teachers and students in the department by promoting simulation-based engineering and design techniques such as finite element methods, computational fluid dynamics, advanced material processing of etc.

### 2) Outcomes:

- Tackling significant scientific topics and societal problems, and communicating their findings to a wide audience, including academics, decision-makers, practitioners, and the general public through publishing in academic journals, conferences, reports, etc.
- Development and maintaining of partnerships and collaborations with other organisations, both inside and outside the field, in order to increase the effect of the research and promote multidisciplinary approaches to challenging problems.
- By providing possibilities for professional development and promotion as well
  as training and mentoring, the institution will be able to nurture the next
  generation of researchers and teaching faculties.

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### 3) Beneficiaries and Benefits:

- Parent Institution: Enhanced reputation, Increased funding, Intellectual property and commercialization, Networking and collaborations, Innovation and entrepreneurship, Recruitment and retention.
- Teaching Faculty:Professional development, Up-to-date knowledge, Enhancing teaching methods, Integration of research into teaching, Increased opportunities for collaboration.
- Research scholars: Career advancement, Intellectual stimulation, Skill development, Networking and collaboration, Publication and dissemination, Funding and resources.
- Students: Hands-on learning, Critical thinking and problem-solving, Career preparation, Mentorship, Networking, Research skills.

### 4) Contributions to Vision and Mission:

- CICMAM can advance knowledge in the field of computational mechanics and advanced materials through research and development of innovative solutions, leading to the development of new technologies and products.
- CICMAM can share its technical expertise in the field of computational mechanics and advanced materials to research institutions, industry partners, government agencies etc.
- CICMAM can promote sustainability by developing new materials and technologies that are more environmentally friendly and contribute to the reduction of carbon emissions and waste.



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### 5) Policy on Centre for Innovations in the department

### 5 A) Policy on Research and Development at CICMAM

Objective: This policy outlines the research and development priorities, objectives, and guidelines for the Centre for Innovation in Computational Mechanics and Advanced Materials (CICMAM).

### 1. Research Priorities and Objectives:

CICMAM's research will focus on advancing knowledge in computational mechanics and advanced materials. Research projects should aim to develop innovative solutions, leading to the creation of new technologies and products.

#### 2. Areas of Focus:

CICMAM will emphasize the use of simulation-based engineering and design techniques, including finite element methods, computational fluid dynamics, and advanced material processing. Projects should adhere to ethical standards and sound research techniques.

### 5B) Policy on Intellectual Property at CICMAM

Objective: This policy defines the ownership and management of intellectual property, including patents, copyrights, and trademarks, generated as a result of research activities at CICMAM.

### 1. Ownership:

Intellectual property rights will be jointly owned by CICMAM and the

researchers involved in the project.

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### 2. Management:

CICMAM will manage and protect intellectual property for the benefit of both the researchers and the institution. Researchers will have the right to use and commercialize the intellectual property.

### 5C) Policy on Ethical and Safety Standards at CICMAM

Objective: This policy establishes moral and safety requirements that researchers at CICMAM must follow when conducting research activities.

#### 1. Research Ethics:

Researchers must adhere to the highest ethical standards, including honesty, integrity, and respect for all individuals. Research involving human subjects or animals must comply with relevant ethical guidelines.

### 2. Safety Guidelines:

All research activities must prioritize the safety of researchers and the environment. Researchers should undergo safety training and follow established safety protocols.

### 5D) Policy on Funding and Resources at CICMAM

Objective: This policy outlines procedures for obtaining funding and other resources for research activities at CICMAM.

### 1. Funding Sources:

Researchers are encouraged to seek external funding through grants, collaborations, and partnerships.CICMAM will provide support and guidance in securing funding.

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2. Resource Usage:Researchers should use resources efficiently and responsibly.Shared resources should be utilized in accordance with established usage guidelines.

### 5E) Policy on Collaborations and Partnerships at CICMAM

Objective: This policy defines the steps for collaborating and forming partnerships with other institutions, including businesses, governmental bodies, and universities.

### 1. Collaboration Initiatives:

CICMAM encourages collaborations to promote multidisciplinary approaches and share technical expertise. Collaborations should align with CICMAM's research priorities and objectives.

### 2. Partnership Agreements:

Formal agreements outlining roles, responsibilities, and intellectual property rights will be established for partnerships. Partnerships should benefit all parties involved and contribute to the advancement of science and technology.

### 5E) Policy on Training and Education at CICMAM

Objective: This policy describes the training programs, workshops, seminars, and other educational opportunities provided by CICMAM to scholars.

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### 1. Training Opportunities:

CICMAM will offer training to enhance the skills and knowledge of researchers and students. Training programs will be designed to promote career development and research skills.

### 2. Accessibility:

Training and educational opportunities will be accessible to all members of CICMAM, including researchers, students, and faculty. The institution will provide support and resources to facilitate participation in these programs. These policies are designed to ensure that CICMAM's research and development activities are conducted in an ethical, safe, and effective manner while fostering collaboration and intellectual property protection.

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