



S. Ramakrishnan Centre of Excellence for Research in Fluid and Thermal Sciences

(ISRO - IITM Collaboration)



No. SR-CoE/RFTS/MOM/1/25

21/04/2025

Minutes of Meeting

(Ref: Office Order No.SC/CH/A.22/137/2024 dt. 19th Dec 2024 issued by Chairman, ISRO/ Secretary, DOS)

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| Meeting No. | 1 |
| Date | 15th April 2025 [Tuesday] |
| Time | 11:00 – 13:00 hr |
| Venue | HTTP Conference Hall, IIT Madras & Online |
| Agenda | <ol style="list-style-type: none">1. Welcome and Introductory Remarks by the Chair & Co-chair, JMC2. Progress review of the originally identified projects3. Discussion & Review of Budget for Consumables, Staff requirements, Contingency provisions, Travel expenses & Center maintenance4. Roadmap & future plan of actions |

1. Welcome and Introductory Remarks

Shri M. Ganesh Pillai, Chairperson, JMC, welcomed the members and invitees for the 1st meeting of Joint Management Council (JMC). He briefly highlighted the inauguration of the centre, which was held on 17th March 2025 and complimented the team behind this important milestone. He also touched upon the ISRO-IITM collaboration and mentioned that the Centre of Excellence for Research in Fluid and Thermal Sciences will add one more feather on this cap. He requested whole-hearted support from the JMC members towards smooth functioning of the centre as envisaged in the MoU.

Prof. P. Chandramouli, Co-Chairperson, JMC extended his gratitude to ISRO for its continued support and informed that IITM will extend its full technical support as per the MoU. He also acknowledged the importance of allocating maintenance funding for the Centre's operational sustainability, independent of project-based budgets.

Dr. P.V. Venkitakrishnan, Professor of Practice, IITM/ Former Director, CBPO, ISRO and JMC Members have also shared their views on the CoE and assured their whole-hearted support in smooth functioning of the centre.

2. Progress review of the originally identified projects

Prof. Arvind Pattamatta, IITM presented two project proposals involving experimental and numerical studies on active and passive spacecraft thermal management systems, relevant to URSC. Dr. Shyama Prasad Das, IITM outlined the objectives and deliverables of a proposal related to LPSC. Prof. Balaji Srinivasan, IITM elaborated on a proposal for

the application of AI/ML and data science in spacecraft thermal management for URSC. Summary of the projects is given in Annexure-I.

JMC reviewed the same and directed to proceed as targeted. JMC also stated that for intense monitoring and detailed technical review of each project, exclusive Task Teams to be constituted for each project. The Task Team shall consist of Members from ISRO & IITM and recommendations of the Task Teams to be presented to JMC for further review & decision. Task Teams shall also verify whether the similar projects/ scopes are already accounted for through any other ISRO-IITM collaborative activities. In such cases, duplication shall be avoided.

Regarding the seed fund of Rs. 1.84 crore, ISRO informed that Department of Space had already issued the financial sanction for releasing the above amount to IITM in 2024-25. However, due to financial year-end budget restrictions/ ceiling, amount could not be released. Currently, ISRO is in the process of expediting the above fund release in 1st quarter of 2025-26.

Regarding project timelines, it was clarified that experimental work will commence after procurement of necessary equipment and establishment of facilities. Prof. C. Balaji, IITM suggested that numerical work can begin once seed funding is received.

IITM has requested that for certain testing activities, existing facilities at ISRO centres may have to be utilised. ISRO responded that detailed requirements after review by proposed Task Teams can be submitted to DTDI/ ISRO for assessing & facilitating the same as per the MoU.

3. Discussion & Review of Budget for Consumables, Staff requirements, Contingency provisions, Travel expenses & Centre maintenance

Prof. Arvind Pattamatta, Member Secretary (IITM), JMC presented a consolidated budget for 3 years which includes recruitment of 1 Senior Project Associate and 3 Junior Research Fellows through ICSR, IIT Madras; consumables for all projects; provisions for travel and miscellaneous expenses; and an Institute Overhead of 20% of project cost or ₹5 lakhs, whichever is lower. He also proposed a modest budget for Centre maintenance, including the recruitment of a full-time Centre Manager to handle administrative and coordination activities. Details are given in Annexure-II.

JMC reviewed and accorded in-principal approval on the proposed budget, with the suggestion that the proposals be revised and resubmitted to align with DoS guidelines. Revised proposal shall be reviewed by Associate Director (RESPOND), CBPO, ISRO and remarks to be furnished to JMC for final approval.

4. Roadmap & future plan of actions

Chairperson, JMC has opined that upon achieving substantial progress in the ongoing projects, more research projects have to be identified and pursued. It was also discussed the possibility of exploring research projects from other departments through their

respective funding support. Since the current MoU is exclusively between ISRO & IITM, this suggestion may be discussed in the future, and a suitable modality can be worked out.

The following are the immediate actions assigned by the JMC:

1. Transfer of Rs. 1.84 crore fund from ISRO/ DoS to IITM to be expedited.

Action: Member Secretary (ISRO), JMC

2. Task Teams for each project to be identified.

Action: Member Secretaries, JMC

3. Testing requirements at ISRO Centres/ Units shall be consolidated and submitted.

Action: Member Secretary (IITM), JMC

4. Revised operational budget requirements for 3 years with a year-wise split-up to be submitted.

Action: Member Secretary (IITM), JMC

5. Upon receiving revised operational budget requirements from IITM, details are to be reviewed, and recommendations, along with tuning, if any, are to be submitted to JMC.

Action: Associate Director (RESPOND), CBPO, ISRO

Chairperson, JMC and Co-Chairperson, JMC have thanked all the participants for their active participation and valuable contributions during the meeting.

Encl.: Annexures-I & II

Prepared by



(Prof. Arvind Pattamatta)
Dept. of Mech. Engg., IITM
Member Secretary (IITM), JMC



(A. Mohamed Sadhik)
Deputy Director, DTDI, ISRO HQ
Member Secretary (ISRO), JMC

Approved by



(Prof. P. Chandramouli)
HoD, Dept. of Mech. Engg., IITM
Co-Chairperson, JMC



(M. Ganesh Pillai)
Director, DTDI, ISRO HQ
Chairperson, JMC

To:

Chairperson, Co-chairperson & Members, JMC and Invitees

Copy for kind information:

Director, IITM and Chairman, ISRO/ Secretary, DOS

Participants:

A) Joint Management Council (JMC):

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|--|-------------------------|
| 1. Shri M. Ganesh Pillai, Director, DTDI, ISRO HQ | - Chairperson |
| 2. Prof. P. Chandramouli, HoD, Mech. Engg., IITM | - Co-Chairperson |
| 3. Dr. M.A. Paul, Associate Director, CBPO, ISRO HQ | - Member |
| 4. Shri N. Raghu Meetei, Associate Director, DTDI, ISRO HQ | - Member |
| 5. Prof. C. Balaji, Mechanical Engineering, IITM | - Member |
| 6. Prof. P. A. Ramakrishnan, Aerospace Engineering, IITM | - Member |
| 7. Prof. Arvind Pattamatta, Mech. Engg., IITM | - Mem. Secretary (IITM) |
| 8. Shri A. Mohamed Sadhik, DD, DTDI, ISRO HQ | - Mem. Secretary (ISRO) |

B) Invitees:

1. Dr. Deepak Kumar Agarwal, PRS, LPSC, ISRO
2. Dr. A.R. Anand, MSA, URSC, ISRO
3. Dr. Pallab Sinha Mahapatra, IITM – PI
4. Dr. Kameswararao Anupindi, IITM – Co-PI
5. Dr. Shyama Prasad Das, IITM – PI
6. Prof. Balaji Srinivasan, IITM – PI
7. Dr. P.V. Venkitakrishnan- POP, IITM,ME
8. Dr. V. Arumugam, ICSR, IITM