

Workshop on Computational Methods for Solving Engineering Problems (CMSEP-2023)

Dept. of Mechanical & Industrial Engg., Dept. of Mathematics, and Dept. of Aeronautical and Automobile Engg., jointly organized a 2-day workshop on “Computational Methods for Solving Engineering Problems” (CMSEP-2023) on 3rd & 4th November, 2023. The workshop was aimed at equipping engineering professionals, researchers, and students with the latest tools and techniques in computational methods. A total of 68 participants from various parts of India actively participated in the workshop. Through interactive sessions, practical demonstrations and expert-led sessions, participants gained a valuable insight into numerical simulations, finite element analysis and computational methodologies. The workshop presented a unique opportunity for participants to enhance their problem-solving abilities, foster interdisciplinary collaboration and stay updated with the rapidly evolving landscape of engineering solutions driven by computation.



The inaugural ceremony of the workshop was held on 3rd November at KEF Auditorium, MIT, Manipal. The chief guest Dr. Anirudh Sanyal, Department of Chemical engineering, NIT, Calicut along with director- MIT, Cdr. Dr. Anil Rana, heads of the three departments, Dr. S S Sharma, Dr. Kuncham Shyam Prasad and Dr. Dayananda K Pai, convenor Dr. Nagaraj N Katagi, co-convenors Dr. Shah Mohammed Abdul Khader and Dr. Manjunatha Gudekote, Organizing Secretary Dr. Ashwini Bhat graced the occasion. Dr. S.S. Sharma welcomed the

gathering and Dr. Nagaraj N Katagi gave an overview of the workshop. In his address, Chief Guest, Dr. Anirudh Sanyal emphasized the significance of latest tools and techniques in computational methods for solving engineering problems. Cdr. Dr. Anil Rana, delivered the presidential address and highlighted the opportunity and support available at MIT Manipal for carrying out multidisciplinary research work. Dr. Shah Mohammed Abdul Khader proposed the formal vote of thanks.

Apart from regular sessions in the computational area, CMSEP-2023 witnessed three key-note addresses from eminent speakers in their respective domains. Dr. Tanmay Basak, Department of Chemical Engineering, IIT, Madras, delivered a lecture on Finite Element Method for Solving Engineering Problems, Dr. N Yagnesh Sharma, Former Professor, Department of Mechanical & Industrial Engineering, MIT, Manipal, addressed on Solving Partial Differential Equations using Finite Volume Methodology and Dr. Anirudh Sanyal, Department of Chemical Engineering, NIT Calicut, discussed Basics of Computational Heat and Fluid Flow using Finite Difference Methodology-from Model Development to Iterative Solutions. These key note addresses enriched the participants with a deeper understanding of various computational techniques and their applications in engineering problem solving. Hands-on sessions were arranged to equip the participants with practical skills in using software tools for simulations and analyses, to tackle complex engineering problems across mechanical, mathematical, electrical, and other disciplines.

The valedictory ceremony of the workshop was held on 4th November, 2024. Dr. Dayanand K. Pai, Head, Dept of Aeronautical & Automobile Engg. welcomed the gathering. Dr. Manjunatha Gudekote, Co-convener of the workshop presented the summary of the workshop. Dr. Ashok Rao, Associate Director, Research & Consultancy, MIT was the Chief Guest and Dr. N. Yagnesh Sharma, former Professor, Department of Mechanical & Industrial Engineering, MIT, Manipal was the Guest of Honour. Their address was followed by a feedback session from the participants. The workshop concluded with a formal vote of thanks by Dr. Shah Mohammed Abdul Khader, Co-convener, CMSEP-2023.

Overall, the workshop on Computational Methods for Solving Engineering Problems was a successful one, providing participants with valuable insights and skills to apply computational methods effectively in engineering scenarios.

