

MATHEMATICAL MODELING AND MACHINE LEARNING

for Engineering and Scientific Applications:
A 3-Day Hands-on Computational Workshop



23, 24, AND 25
SEPTEMBER
2026



11:00 AM -
05:00 PM
(MYT)



Via
Zoom Meeting



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Key Learning Outcomes:

- Master dimensional analysis to convert engineering problems into mathematical models
- Solve complex boundary value problems using **PYTHON** and **MATHEMATICA**
- Execute advanced numerical and symbolic computation
- Interpret physical relevance through graphical and computational analysis

REGISTRATION FEES:

Participation Category	National Participants (Malaysian)	International Participants
UG/PG Students	RM 50.00	USD 10
Ph. D. scholars and Post-Docs	RM 60.00	USD 15
Faculty members/Academicians	RM 100.00	USD 25

Register through the link



or Scan the QR

All registered participants will
receive an official e-certificate
of attendance.

REGISTER NOW



Important Dates

Registration Opens: 17 Aug 2026
Registration Deadline: 21 Sept 2026

ORGANISED BY:
CENTRE FOR MATHEMATICAL
SCIENCES AND INTELLIGENT SYSTEMS (CMSIS)

For more details: varunr@sunway.edu.my

Workshop Overview:

This intensive 3-day online program bridges the gap between theoretical formulation and practical implementation in modern scientific research. Participants will gain hands-on experience in translating complex engineering problems into robust mathematical models. Through guided sessions utilizing industry-standard computational tools such as **PYTHON**, **MATHEMATICA** and **ADVANCED CODING PLATFORMS**, attendees will master dimensional analysis, boundary value problems, and symbolic computation. Designed for researchers, students, and professionals, the workshop equips participants with the computational methodologies required to execute numerical simulations, perform advanced graphical analysis, and interpret the physical significance of mathematical solutions.

Workshop Themes and Details:

Foundations of Mathematical Modeling and Scientific Computing

Day 1 (23rd September 2026)

- Module 1: From Engineering Problems to Mathematical Models: Dimensional Analysis and Model Development
- Module 2: Python for Scientific Computing (Hands-on session)

Computational Modeling and Scientific Applications

Day 2 (24th September 2026)

- Module 3: Boundary Value Problems: Mathematical Formulation and Scientific Applications
- Module 4: Numerical Computation Using Mathematica (Hands-on session)

Symbolic Computation and Integrated Research Applications

Day 3 (25th September 2026)

- Module 5: Mathematical Modeling for Engineering Applications and physical relevance
- Module 6: Symbolic Computation with advanced coding (Hands-on session)