



Two-Day Workshop on Design for Additive Manufacturing (3D Printing)

May 12-13, 2026



Organized by CoE PIAM 3D, National Centre for Physics, Islamabad

Introduction:

This two-day workshop focuses on key aspects of Design for Additive Manufacturing (DfAM) for polymer and metal 3D printing technologies. The workshop primarily focuses on critical design considerations such as optimal part orientation, support structure design and distortion prediction in additive manufacturing processes. The common failures that occur during printing and their solutions will be discussed in details to avoid failure in print.

A key component of the workshop will be hands on training using specialized additive manufacturing software tools, where, participants will practice generating support structures, performing distortion and build simulations. The event sessions will demonstrate how simulation can be used to predict potential build failures, enabling designers to optimize their parts before printing.

In addition, the workshop includes two expert lectures delivered by international speakers from **Turkish Aerospace Industries (TAI)**, who will share insights into advanced DfAM strategies and real-world industrial applications of additive manufacturing.

Key Learning Objectives

- Understand the fundamental principles of DfAM for metal and polymer 3D printing processes
- Recognize the influence of part orientation on build quality, support structure requirements, post processing and surface finish.
- Gain knowledge of distortion and residual stress formation in additive manufacturing and methods to mitigate.
- Acquire practical skills in using software (Simufact/Magics/Digmat) tools for support generation and distortion simulations.
- Learn from practical demonstrations and hands-on experience highlighting common challenges and methods for improving build success

Target Audience

Professionals from Engineering firms/Industries, Faculty of Universities.

Online Registration form can be accessed at:

<http://www.ncp.edu.pk/wdam-2026.php>

- **Registration Fee (Rs 20,000/-** per participant) to be deposited in following account:
Account Title: Director National Centre for Physics
Branch Code: 0294
Account No: 00114487-01
Bank: Habib Bank Ltd, QAU Branch, Islamabad

For further Information, please contact:

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Mr. M. Kamran Saadat

Mr. Zia-ud-Din Kasi

Dr. Ali Ahmad

Dr. Tanzeel Murtaza

Takeaways for Participants

- Fundamental understanding of Additive Manufacturing
- Ability to apply design for additive manufacturing (DFAM) principles
- Hands on experience with software tools used for support generation and distortion simulation.
- Exposure to industrial practices and case studies through expert lectures from Turkish Aerospace

Venue

National Centre for Physics (NCP),
Shahdara Valley Road, Islamabad

For Queries

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Deadline
April 30, 2026