



**Last date for registration 16 May 2018**

## FOCUS AREAS

- Understanding of stacks and why do we need it
- Statistical tolerancing, Process capability indices and 6 Sigma
- Loop diagram and the dimensional objective or critical functional relationship to analyze.
- Calculate nominal output and statistical variation using statistical methods.
- Worst case tolerance calculation, WC
- Effect of dimensioning practices on tolerance variation
- Root Sum Square, RSS and Modified Root Sum Square, MRSS
- Empirical correction factors, Bender, Gilson, Gladman, and Greenwood.
- Geometric Dimensioning & Tolerancing, application in Stacks analysis
- Part stacks using bonus tolerance and datum shift, Float and biased floats
- Effect of form and orientation tolerances in Stacks
- Assembly stacks using profile, run out and position

## KEY TAKE AWAYS

After undergoing the programme, the participants will be able to -

1. Understand stack-up analysis and why it is required in today's design.
2. Analyse and optimize the designs for ease of manufacturing and assembly while keeping functionality intact.
3. Identify the critical tolerances which require tighter tolerance control or statistical process control, SPC.
4. Enlarge drawing tolerances and thereby reducing cost of design.
5. Develop robust design with low risk of failure.

## PARTICIPATION FEE

**Rs. 11000/-**

**IMTMA Members / Micro Companies / Individual**

**Rs. 12000/-**

**IMTMA Non Members**

**Rs. 6000/-**

**Educational Institutions / Students**

**+ 18% GST per participant**

**Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company**  
**Special concession available for Faculty & Students from engineering colleges**  
(subject to availability of seats)

**Register for this Programme**

## PARTICIPANT PROFILE

This programme will be an advanced level one and will benefit Designers / product design engineers responsible for specifying, interpreting and analyzing tolerances.

Knowledge of Engineering Drawing and GD&T principles will be a pre requisite for participants to learn the techniques of tolerance stack-up analysis.

## FACULTY

This programme will be conducted by Mr. Srinivas B, Industry expert in Product design and development. Mr. Srinivas has more than 23 years of rich experience in Aerospace and Auto industries in leadership roles within India and international locations. He has immense hands on experience on stack-up analysis and carried out several complicated projects involving 20 to 30 components and several floats. He has thorough knowledge of various Quality Standards for enhancing the operational efficiency such as Six Sigma, ISO9001, TS16949, etc., and is a Six Sigma green belt trained and certified by Cummins.

## For Registration Contact

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**REGISTRATION** : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.

**Important Information** : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.