Advanced Surface Metrology Using Contact and Non-contact Methods

(A Measurement Assurance Program Course)

27 Oct 2020, 9:00 am – 5:00 pm, NMC

Introduction

This course aims to introduce advanced surface metrological concepts, practical knowledge and instrumental design in surface topography measurement and calibration. It covers:

- Definition of Surface texture & topography — Surface Metrology
- Contact & Non-contact Methods in Surface Metrology
- Corresponding Instrumentation Design
- Traceability & Calibration in Surface Metrology

Course Leader

Dr Wang Shihua is a Senior Metrologist in NMC/A*STAR. He has many years of experience in the area of length and dimensional measurement covering micro-scale and nano-scale range. Prior to joining NMC in 2005, he worked as a research fellow in the Department of Mechanical and Production Engineering, National University of Singapore, a lecturer and associate professor in Sichuan University, China. His R&D interests include measurement of surface topography, development of contact and non-contact methods in surface metrology and related instrumentation design. He has authored and co-authored over 70 journals and conference publications.

Course Contents

Introduction to Surface Metrology

- Definition of surface texture/topography

Methodology

- Contact Methods:
  - Stylus Profilometer
  - Atomic Force Microscopy
- Non-contact Methods:
  - Laser Scattering
  - Optical Triangulation
  - Optical Confocal Microscopy;
  - Optical Interference Microscopy

Metrological instrumentation in surface metrology

- Traceability in surface metrology
- Primary calibration standards
- Secondary Calibration Standards

For Whom

Test engineers, Calibration engineers, Surface metrology equipment suppliers, Quality assurance and quality control personnel, Process control engineers.

Online-Course Registration

☐ Fee $450.00+GST (registration close 2 week before the course date)

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Please fax filled-in form to 62791992, or e-mail to shirley_tng@nmc.a-star.edu.sg to register.

Name of Participant

Ms
Mr
Dr

Designation

Business Telephone

Company

E-mail

Address

Signature/
Co Stamp

Date

☐ Check if vegetarian

Acceptance of registration is based on first-come-first-served basis. Payment is to be made by crossed cheque to “SCEI-NMC”, by telegraphic transfer, by credit card or by NETS. 50% is refundable for withdrawals in writing at least 10 working days before the commencement of the course. NMC reserves the right to cancel or postpone the course. In the event of cancellation, registration fees will be fully refunded.