JOINT SEMINAR & AFM WORKSHOP

Advanced Surface Metrology Solutions for SEMI-MEMS & Photonic Applications

July 5th, 2023 – Fraunhofer ENAS, Chemnitz, Germany

Fraunhofer ENAS and Bruker Nano Surfaces kindly invite you to this joint, one day Seminar & AFM Workshop in Chemnitz, Germany, on advanced surface metrology solutions for semiconductor, microelectronics, and photonic industries.

The focus of the seminar is to provide new insights into surface characterization and analysis techniques, from the µm to nm scale, in applications ranging from process control, to failure analysis and R&D.
The following techniques will be covered:

- Industrial Atomic Force Microscopy (AFM)
- White Light Interferometry (WLI)
- Photothermal AFM-IR
- Nanomechanical Metrology
- Multiple-Angle Reflectometry

In the afternoon hands-on session, we will demonstrate how to set up automated AFM measurements on the Dimension ICON PRO300, accurately measure surface roughness and step height, and how to master deep narrow trenches and holes using PeakForce DT Probes.

You can also schedule an individual demonstration and have your own sample measured on the Dimension ICON PRO300 AFM and/or ContourX-500 WLI in the afternoon session or the following day.

Please book your individual demonstration by contacting Klaus.Pross@bruker.com. As availability is limited, we suggest you pre-book in advance.

Venue

Fraunhofer Institute for Electronic Nano Systems ENAS
Conference room: 016/019
Technologie-Campus 3
09126 Chemnitz, Germany
Google Maps

Costs and Registration

The workshop is free of charge. Please click here to register.

Program – Wednesday, July 5th, 2023

09:00 Registration and Coffee

09:50 Welcome & Introduction
Dr. Knut Gottfried, Fraunhofer ENAS, and Klaus Pross, Bruker Nano Surfaces

10:00 Technology Overview & Examples of Applications: Advanced AFM-based Solutions for the SEMI, MEMS and Photonic Industries.
Dr. Hartmut Stadler, Application Scientist, Bruker Nano Surfaces

10:25 Automatic Analysis of CMP Dishing in Via Arrays from AFM Images
Dr.-Ing. Andreas Zienert, Dr. Doreen Hensel, Fraunhofer ENAS

10:45 Correlated Nanoscale Electrical Characterization and High-Performance Applications
Dr. Hartmut Stadler, Application Scientist, Bruker Nano Surfaces

11:10 Coffee break

11:30 InSight CAP Automated AFM - AFM Applications at Fraunhofer ENAS for Semiconductor and MEMS Manufacturing
Jens Bonitz, Dr. Anke Hanisch, Fraunhofer ENAS

11:50 Technology Overview & Examples of Applications: WLI and Reflectometry Characterization for Thin Films, CMP, Pad Recess, Bump Height, TSV and Packaging Applications.
Dr. Udo Volz, Application Scientist, Bruker Nano Surfaces

12:15 Lunch Break

13:30 Practical Sessions (parallel):
1. Dimension ICON PRO300 AFM for sample sizes up to 300mm wafers
2. Contour X-500 WLI

15:00 Individual Sample Measurements

17:00 Closing

Thursday, July 6th, 2023

09:00 Individual Sample Measurements
1. Dimension ICON PRO300 AFM
   for sample sizes up to 300mm wafers
2. Contour X-500 WLI