



2014 Annual Workshop and Conference • September 23-26
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Agenda: Tuesday September 23, 2014

18:00 – 20:00 “Meet and Greet” in the Paris Room inside the International Plaza. Meet your speakers, organizers and network with your metrology colleagues.
Sponsored By: Helmel Engineering Products Inc.

Agenda: Wednesday September 24, 2014

08:00 – 09:00 Exhibits & Coffee

09:00 – 09:10 Welcome and Announcements
Mr. Kos Doytchinov
Kotem Technologies

09:10 – 09:40 Keynote Speaker:
Mr. Mark Lewis
VP Tooling and Services, Candu Energy

09:40 – 10:40 Free form surface Measurement Technology Overview
Dr. Prof. Simone Carmignato
University of Padova, Italy

10:40 – 11:10 Coffee Break / Exhibitions

11:10 – 12:10 Computed Tomography Scanners
Dr. Marcin Bauza
Director of New Technology and Innovation, Zeiss

12:10 – 12:40 Accuracy of x-ray computed tomography in industrial metrology
Dr. Prof. Simone Carmignato
University of Padova, Italy

12:40 – 13:50 Lunch & Exhibits

13:50 – 14:30 Gage Repeatability and Reproducibility Studies and Task Specific Measurement Uncertainty
Mr. Keith Summers
Productivity Quality Inc.



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Agenda: Wednesday September 24, 2014, continued

- 14:30 – 15:15 CMMs, AACMMs, and Laser Trackers : Know the Errors Sources and Improve Accuracy**
Dr. Steven Phillips
National Institute of Standards and Technology, NIST
- 15:15 – 15:45 Breaks & Exhibits**
- 15:45 – 16:10 Evaluating CT for metrology: the influence of material thickness on measurements**
Dr. Joe Schlecht
North Star Imaging
- 16:10 – 17:10 Computed Tomography Open panel discussion**

Agenda: Thursday September 25, 2014

- 08:00 – 09:00 Exhibits & Coffee**
- 09:00 – 9:40 Evaluating CMM Probes Probe Heads, and Styli**
Dr. Ed Morse
University of North Carolina at Charlotte (UNCC)
- 9:40 – 10:00 Probe Qualification - explaining the reason for the bi-directional errors**
Mr. Kos Doytchinov
Kotem Technologies
- 10:00 – 10:30 Measurement Sampling Strategies**
Dr. Steven Phillips
National Institute of Standards and Technology, NIST
- 10:30 – 11:00 Coffee Break and Exhibits**



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Agenda: Thursday September 25, 2014, *continued*

- 11:00 – 11:50 In Process Closed Loop Metrology for Adaptive Manufacturing**
Mr. Ray Karadayi
President & CEO - Applied Automation Technologies, Inc.
- 11:50 – 12:30 Verification of an Articulated Arm Coordinate Measuring Machine by means of an Indexed Metrology Platform**
Dr. Agustín Brau Avila
University of Sonora, Mexico
- 12:30 – 13:50 Lunch & Exhibits**
Sponsored By: Zeiss
- 13:50 – 14:20 How can Profile Tolerancing can be used to minimize inspection and throughput time when compared to linear tolerancing. A cost benefit analysis will be presented to contrast the two approaches.**
Mr. Jim Stertz
Director of Quality/Technology, Lowell Inc.
- 14:20 – 14:50 Interim testing strategies for Coordinate Measuring Machines**
Dr. Ed Morse
University of North Carolina at Charlotte (UNCC)
- 15:00 – 15:30 Break / Exhibits**
- 15:30 – 16:50 Analysis of Profile for Proof of Compliance vs Process & Design Feedback**
Dr. Greg Hetland
International Institute of Geometric Dimensioning and Tolerancing, USA
- 16:50 – 17:00 Final Announcements and Close Workshop**



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Agenda: Friday September 26, 2014

- 08:00 – 08:30 Meet in Exhibitors Room
(where NACMA exhibits were shown)**
- 08:30 - 09:00 Shuttle Bus to Candu**
- 09:00 - 11:30 Candu Energy Tours**
- 11:30 - 12:00 Shuttle Bus back to International Plaza**