

2013 Annual Workshop and Conference • August 28-30
NIST, Gaithersburg, MD, USA

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Agenda: Tuesday August 27, 2013

- 17:00 – 20:00** **Pick up your NACMA badge needed for admittance to NIST and other NACMA course handout material.**
Location: In front of the Grand Ballroom, Holiday Inn Gaithersburg.
- 19:00 – 21:00** **2013 NACMA Reception! Great finger food, drinks, live music, and door prizes.**
Brought to you by the generous support of:
Hemel Engineering, Quality Vision International, ASME
Location: Grand Ballroom, Holiday Inn Gaithersburg.

Agenda: Wednesday August 28, 2013

- 08:00 – 09:00** **Exhibits & Coffee**
- 09:00 – 09:10** **Welcome and Announcements**
- 09:10 – 09:35** **Keynote Speaker: Importance of Coordinate Metrology in Manufacturing**
Mr. Dean Beutle
Director, Caterpillar Production System - Americas
- 09:35 – 10:20** **CMM Accuracy Concepts and the Y14.5 Measurand**
Dr. Steve Phillips
National Institute of Standards and Technology, NIST
- 10:20 – 10:55** **Coffee Break / Exhibitions**
Brought to you by the generous support of: GDT-Consultants
- 10:55 – 11 :50** **Know the key Y14.5 Issues Before You Measure**
Dr. Greg Hetland, President
International institute of Geometric Dimensioning and Tolerancing, USA
- 11:50 – 12:20** **CMMs, AACMMs, and Laser Trackers : Know the Errors Sources and Improve Accuracy**
Dr. Steven Phillips
National Institute of Standards and Technology, NIST, USA



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Agenda: Wednesday August 28, 2013, *continued*

- 12:20 – 13:40 Lunch & Exhibits**
Brought to you by the generous support of: ASME
- 13:40 – 14:40 Thermal Effects in CMMs and Workpieces**
Dr. Jim Pekelsky
Canadian Dimensional Metrology, Ottawa, Canada
- 14:40 – 15:05 CMM Loading & Fixturing Effects**
Mr. Dean Beutle
Director, Caterpillar Production System - Americas
- 15:05 – 15:40 Breaks & Exhibits**
Brought to you by the generous support of: Metrosage
- 15:40 – 16:20 CMM Probes and Styli Effects**
Dr. Ed Morse
Ed Morse, University of North Carolina at Charlotte (UNCC)
- 16:20 – 17:00 Measurement Sampling Strategies**
Dr. Steven Phillips & Dr. Kim Summerhays
Steven Phillips, National Institute of Standards and
Technology, NIST
Kim Summerhays, MetroSage

Agenda: Thursday August 29, 2013

- 08:00 – 09:00 Exhibits & Coffee**
Brought to you by the generous support of: ASME
- 09:00 – 10:00 CMM Software Concepts and Testing**
Dr. Craig Shakarji
National Institute of Standards and Technology (NIST)
- 10:00 – 10:25 Industrial Applications of Software**
Mr. Kos Doytchinov
Kotem Technologies



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Agenda: Thursday August 29, 2013, *continued*

- 10:25 – 11:00** **Coffee Break and Exhibits**
Brought to you by the generous support of: **Metrosage**
- 11:00 – 11:30** **Techniques for High Accuracy CMM Measurements**
Mr. John Stoup
National Institute of Standards and Technology (NIST)
- 11:30 – 12:00** **GR&R vs. Task Specific Uncertainty**
Mr. Keith Summers
Productivity Quality Inc.
- 12:00 – 12:30** **Scanning with Triangulation Probes**
Dr. Robert Bridges
FARO Technologies
- 12:30 – 13:50** **Lunch & Exhibits**
Sponsored by **Nikon**
- 13:50 – 14:30** **Economics of Coordinate Metrology**
Mr. Keith Summers
Productivity Quality Inc.
- 14:30 – 15:00** **CMM Measurement Accuracy: Estimating Trade offs**
Dr. Kim Summerhays
MetroSage
- 15:00 – 15:35** **Break / Exhibits**
- 15:35 – 16:00** **CMM Measurement Tricks**
Dr. Steven Phillips & Mr. Kos Doytchinov
Steven Phillips, National Institute of Standards and Technology,
NIST
Kostadin Doytchinov, Kotem Technologies
- 16:00 – 16:25** **Quality Measurement Standards implement Quality Information Framework**
Mr. Ray Admire
Lockheed Martin Missiles and Fire Control



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Agenda: Thursday August 29, 2013, *continued*

**16:25 – 16:55 Discussion Panel: Ask an Expert!
All Speakers**

16:55 – 17:00 Final Announcements and Close Workshop

Agenda: Friday August 30, 2013

**08:00 – 08:30 Meet in NIST Portrait Room
(where NACMA exhibits were shown)**

08:30 - 08:50 Walk to Laboratories

08:50 - 11:00 NIST Dimensional Metrology Laboratory Tours

11:00 - 11:15 Walk back to Portrait Room