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NBI CCWLA
"TRia1616 Blv17"

Centre for Industrial Application of CT scanning (CIA-CT)

DTU

Project co-funded by the Ministry of Science, Technology and Innovation

- Centre of Excellence
- Dissemination
- Collaboration
- 5 research projects
- Initiation of new activities

Project coordinator: DTU Mekanik

Project duration: 4 years (1st Sep. 2009 – 31st Aug. 2013)

Project budget: 4 M€

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THE CONFERENCE!
GOD FORNØJELSE!
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Presentation Overview
InnospeXion – short presentation
The special X-ray technology
The fundamentals of the project:
- Why ?
- Defects in wood
- Image reconstruction
- Image analysis
- Special handling of wood planks
- The end result
The outcome
treeDfurniture
InnospeXion
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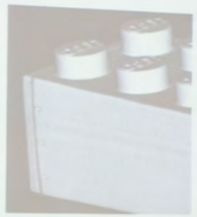
werth
Messtechnik

Starting point prior to 2005

CT for non-destructive Testing

- Optimized for non-destructive testing – metrology aspects are not considered
- Missing software integration → use of different software tools is necessary
- Long term stability not guaranteed
- Measuring points → Global "ISO threshold"
- Accuracy approximately 50 - 100 micrometer



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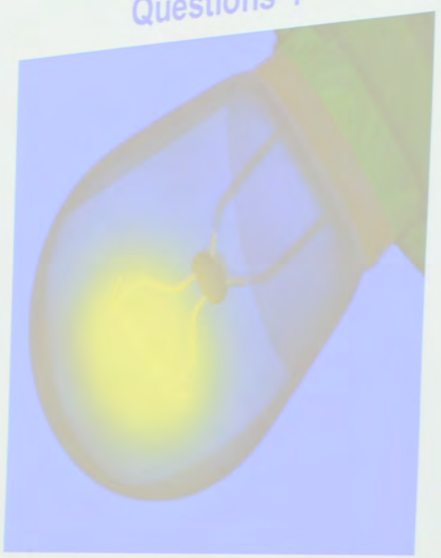
Questions ?



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[VDI/VDE 2617-13:2011]

Calibrated spheres

CT measurement results

Practical solution to the measurement of metrological structure resolution

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C D E

ts extraction method

ncreased filtering

od n	Points in one neighbourhood	Total number of points
	-	9619
	1	25
	5	225
	34	855
	92	2290

22.5 deg.

n to the measurement of metrological structure resolution

CIA-CT, 19 June 2013

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Nikon
NPL

- A recognised standard is needed.
- Metrology CT will have an impact on the market of dimensional inspection and merge it with material inspection.

But ...

- Still more research needed for better understanding ap
making it applicable to a wider range of applications

NIKON METROLOGY / VISION BEYOND PRECISION

NPL National Physical Laboratory

National Measurement System

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Applications of CT in the manufacturing industry

Wenzel Volumetrik GmbH

Dr. Martin Simon

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CT in the food industry
Lars Bager Christensen
Senior Scientist, MSc, PhD
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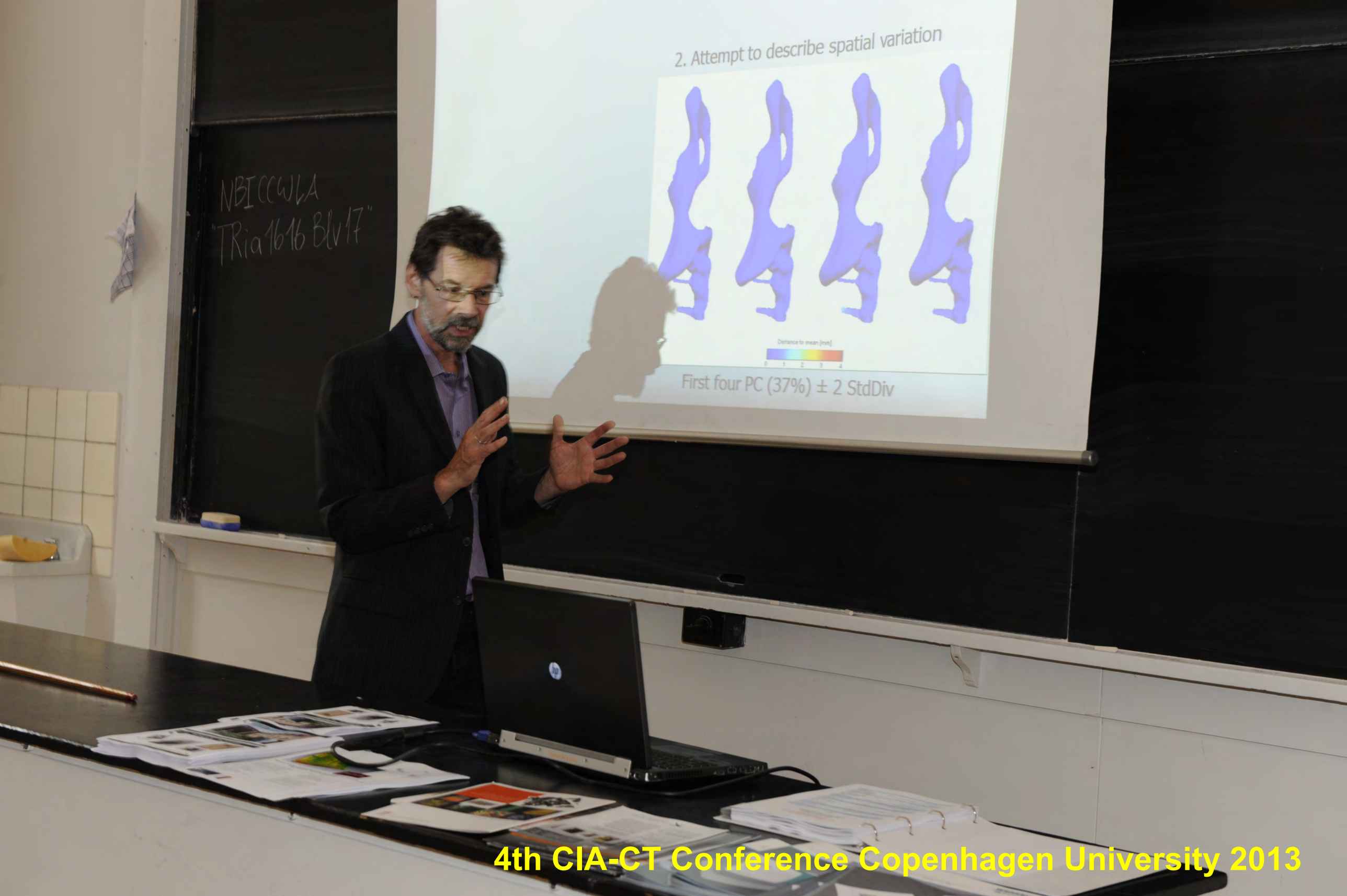

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Reference for LMC
Yield simulation
Production tomography