

## **Swedish Research School in Tribology**

[www.ltu.se/tribology-school](http://www.ltu.se/tribology-school)

A Course on

# **Metrology and Properties of Engineering Surfaces**

September 22-24 2009

Halmstad University

*(lecture room P-House P, Seminar room floor 3)*

## *Preliminary Programme v.0820*

### **September 22, (Tuesday)**

08.15-08.30 Welcome and Introduction (BG)

08.30-09.00 Surface Roughness and Principles of Roughness Measurements (TomT)

#### *Module 1 METROLOGY*

09.00-11.00 Stylus Instruments (incl. Coffee) (TomT)

11.00-12.00 Hands-On 1: Mechanical Instruments (StefanR, ZlateD)

12.00-13.00 LUNCH (kåren)

13.00-14.00 Principles of interference, and scattering (LarsB)

14.00-15.00 Optical Instruments (CH3) (BG)

15.00-15.30 Stripe projection (StefanR)

15.30-16.15 Other Measurement techniques (CH4)

- SEM (FredericC)

- Scanning microscopy (HåkanP)

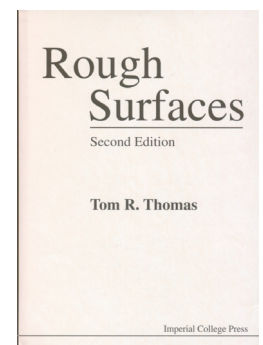
16.15-17.00 Other Measurement topics(CH 5)

- Relocation and Replication (ZlateD)

17.00-17.30 CASE1: STATE-of-the-art in METROLOGY (BG)

17.30-20.00 Hands-On 2: Optical Instruments (StefanR, FredericC)

20.00-.... Welcome buffet at the University, Own time, preparing CASE1





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**September 23, (Wednesday)**

08.15-09.00 CASE1: continued own preparation (group)

09.00-09.30 CASE1: Presentation (BG)

#### *Module 2 CHARACTERISATION*

09.30-11.00 Data Acquisition and Filtering (CH 6) (incl. Coffee) (TomT)

11.00-12.00 Hands-On 3: 2D filtering and Omnisurf (ZlateD)

12.00-13.00 LUNCH (kåren)

13.00-14.00 Amplitude Parameters (CH 7) (TomT)

14.00-15.00 Texture parameters (CH 8) (BG)

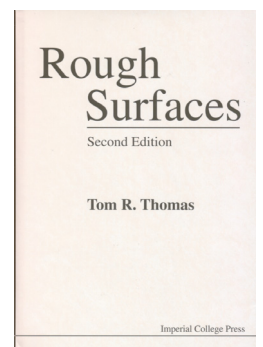
15.00-16.00 Surfaces i Three Dimensions (CH 9) (FredericC)

16.00-17.00 Hands-On 4: Parameters, 3D and Mountains Map (SabinaR)

17.00-17.30 CASE2: STATE-of-the-art on Characterisation (BG)

17.30-19.30 Own time, preparing CASE1

19.30-..... Dinner at Wild-West Steakhouse





## **Swedish Research School in Tribology**

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#### **September 24, (Thursday)**

08.15-09.00 CASE2: continued own preparation (group)

09.00-09.30 CASE2: Presentation (BG)

#### *Module 3 Advanced CHARACTERISATION and APPLICATIONS*

09.30-11.00 Contact Mechanics and Roughness (CH 10) (incl. Coffee) (TomT)

11.00-12.00 Characterising Wear and friction of CAMs and Liners (FredericC, ZlateD)

12.00-13.00 LUNCH (kåren)

13.00-14.00 Feature Characterisation (LiamB)

14.00-14.45 Multi Scale Characterisation (MohamedM)

14.45-15.30 Wrapping up and Home assignment (BG)

**Day 4 (2hrs)** InternetWorkshop1 (date to be decided at course start): Motifs and Sarah Threes (HassanZ)

**Day 5 (2hrs)** Internet Workshop2 (date to be decided at course start): Wavelet filtering (JaneX, LiamB)

**Day 6 (2hrs)** Internet Workshop3 (date to be decided at course start): Examination and presentation of home-assignments (BG)

BG: *Bengt-Göran Rosén*, professor, Halmstad University, Chalmers University of Technology

TomT: *Tom Thomas*, professor, Halmstad University

LiamB: *Liam Blunt*, professor, University of Huddersfield, Halmstad University

MohamedM: *Mohamed El Mansuri*, professor, ENSAM Chalons de Champagne

HassanZ: *Hassan Zahouani*, professor, Ecole Central de Lyon, ENISE Saint Etienne

JaneX: *Jiang Xiang*, professor, University of Huddersfield

LarsB: *Lars Bååth*, professor, Halmstad University

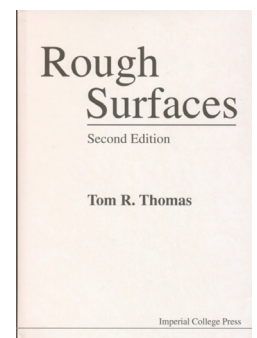
HåkanP: *Håkan Pettersson*, professor, Halmstad University

SabinaR: *Sabina Rebggiani*, Lic. Eng., Halmstad University

FredericC: *Frederic Cabanettes*, Lic. Eng., Halmstad University

ZlateD: *Zlate Dimkovski*, Lic. Eng., Halmstad University

SR: *Stefan Rosén*, Ing. Mech., toponova AB





## **Swedish Research School in Tribology**

**How to get to Halmstad:**

[www.hh.se/omhogskolan/besokoss.307.html](http://www.hh.se/omhogskolan/besokoss.307.html)

Visiting and travelling information in Swedish. For Hotel –see links under (Bo på hotel): Best Western Grand Hotel is the preferred choice. Budget lodging can be found at Quality Hotel Eurostop.

**How to find us at the Campus:**

<http://www.hh.se/omhogskolan/besokoss/harfinnsvi/kartahogskoleomradet.1252.html>

Find House P (close by parkings are available), Third floor

