



in co-operation with RISE



**Course: PAPER SURFACES –
Characterization and properties**

Course leaders: Doc. Peter Rättö, RISE Bioeconomy

Date: September 30-October 3, 2019

Place:

RISE Innventia, Drottning Kristinas väg 61
Treeseach, Teknikringen 38

Principal lecturers:

Docent Janet Preston från Imerys, Prof Patrick Gane från Aalto University, Prof Agne Swerin,
Docent Li Yang och Docent Peter Rättö

Monday, September 30, 2019: 5h

Place: RISE Innventa, Drottning Kristinas väg 61, Room: Sundbladssalen

INTRODUCTION TO PIGMENT COATED PAPER SURFACES

12:00-12:10 Welcome and introduction remarks, Doc. Peter Rättö

12.15-13.00 Janet Preston, Imerys: Introduction to pigment coated paper surfaces and ways to characterize its properties (including raw materials and its impact on coating structure)

CHEMISTRY OF PAPERS SURFACE

13.15-15.00 Agne Swerin, KTH: Basics of wetting and spreading with examples

Coffee

PHYSICAL PROPERTIES OF PAPER SURFACES

15.15-17.00 Li Yang, RISE Bioeconomy: Light scattering and paper gloss.

Tuesday, October 1, 2019: 8h

Place: Treeseach, Teknikringen 38, Treeseach large meeting room

8.15-9.00 Janet Preston, Imerys: Advanced analysis - determination of the distribution of latex and ink

CHEMISTRY OF PAPER SURFACES

9.15-11.00 Marie Ernstsson, RISE Bioscience and Materials: Surface Chemistry of Papers - Overview different surface analysis techniques followed by examples

TOPOGRAPHY OF PAPERS SURFACE

11.15-12.00 Peter Rättö, RISE Bioeconomy: Surface topography: Definitions and measurement techniques

Lunch

13.15-14.00 Peter Rättö, RISE Bioeconomy: Surface topography: contact mechanics

MECHANICAL PROPERTIES OF PAPER SURFACES

14.15-15.00 Peter Rättö/Johan Alfthan, RISE Bioeconomy: Mechanical properties of coatings,

Coffee

15.15-17.00 Johan Alfthan, RISE Bioeconomy: Creasing and Cracking

Wednesday, October 2, 2019: 8h

Place: RISE Innventa, Drottning Kristinas väg 61, Room: Innoversum

PORE STRUCTURE AND INTERACTIONS WITH LIQUIDS

8.15-10.00 Patrick Gane från Aalto University: Pore structure characterization, the pore-core model, short time wetting,

Coffee

10.15-12.00 Patrick Gane från Aalto University: Pore structure characterization, the pore-core model, short time wetting.

Lunch

EVALUATION OF PRINT QUALITY

13.15-15.00 Siv Lindberg, RISE Bioeconomy: Evaluation of print quality: Perception, measurement and application

Coffee

15.15-17.00: Erik Blohm, Solveum: Paper surfaces in lithography/offset printing

Thursday morning, October 3, 2017: 6h

RISE Innventa, Drottning Kristinas väg 61, Room: Innoversum

8.15-10.00 Sofia Thorman, RISE Bioeconomy: Paper surfaces in flexographic printing

10.15-12.00 Li Yang, RISE Bioeconomy: Paper surfaces in digital printing

Lunch

13.15-15.00 Dimitar Valtakari, RISE Bioeconomy: Surfaces for electronic applications

15:00- End of course, Doc. Peter Rättö