

CONFERENCE PROGRAM



Opening session

- 15.00 - 15.20** ▪ Opening of the conference
Helene Juhola
- 15.20 - 15.50** ▪ Opening presentation
Polymer nanocomposites reinforced with poly-saccharide nanocrystals
Alain Dufresne (LGP2, INPG, Grenoble, France)



Plenary session 1: Industry development and strategies

Chair: Helene Juhola

- 16.05 - 16.30** ▪ Positioning in the printing industry differentiation in terms of price, lead time, print quality and flexibility
T. Mejtoft, M. Viström (STFI-Packforsk and KTH, Stockholm, Sweden)
- 16.30 - 16.55** ▪ Tabloidvs. Broadsheet: is format change the magic bullet for newspapers?
H.-J. Bucher (University of Trier, Germany)
- 16.55 - 17.20** ▪ Importance of short production runs, variable data printing and web interfaces **M. Viström, T. Mejtoft** (KTH and STFI-Packforsk, Stockholm, Sweden)
- 17.20 - 17.45** ▪ New business models for printed functionality
U. Lindqvist, L. Hakola, H. Lilla, P. Moilanen, T. Siivonen (VTT, Espoo, Finland)

- 18.00 - 19.30** **Concert and Welcome cocktails** (Grande galerie)

9.00 - 9.30

Introductory session - Keynote lecture 1:

Printed electronics: what to expect ?

William J. Ray (Applied Printed Electronics, Holt, MI, USA)

9.30 - 9.55

Plenary session 2: Environment and sustainability

- Customer-oriented and sustainable printed paper - **H. Wessman, A. Leinonen, C. Hohenthal-Joutsimo** (KCL, Espoo, Finland)

9.55 - 10.20

- Energy efficiency improvement for graphic/media SMEs - **A. Politis, M. Dattner** (TEI, Athens, Greece)

10.20 - 10.45

- Screening environmental life cycle assessment of printing newspaper, web based newspaper and tablet e-paper newspaper - **Å. Moberg** (STFI-Packforsk and KTH, Stockholm, Sweden)



11.15 - 11.40

Session 3A: Offset printing

- Mechanisms of non-image area accumulation in HSWO - **S. Passoja, U. Mattila, A. Sneck** (KCL, Espoo, Finland)

11.40 - 12.05

- Aquapiling: Coated substrate-related influences on reverse piling from a one-side single colour image in multicolour offset printing - **P. A. C. Gane, C. J. Ridgway et al.** (Omya AG, Oftringen, Switzerland and UPM-Kymmene Research Centre, Lappeenranta, Finland)

12.05 - 12.30

- Aspect on water-induced mottle when printing on coated paper in sheet-fed lithographic offset - **C. Lie** (KTH, Stockholm, Sweden)

12.30 - 12.55

- Predicting print-through in coldset newsprint - **C. Antoine** (LGP2, INPG, Grenoble, France)

Session 3B: Special materials

- Measurement of colour on translucent material viewed by reflection - **A. Sole, P. J. Green** (London College of Communication, London, UK)

- The problem of a quantitative evaluation of adhesive strength in printing on polymer films - **V. G. Nazarov, E.B. Bablyuk, B.P. Stolyrov** (MGUP, Moscow, Russia)

- Modification of the polymeric films surface for the quality printing - **V. G. Nazarov, E.B. Bablyuk, B.P. Stolyrov** (MGUP, Moscow, Russia)

- Colour differences on offset printed PET and PVC shrink sleeve labels - **G. Golob, Diana Gregor** (Boštjan Zorz, NTF, University of Ljubljana, Slovenia)



Session 4A: Flexography & gravure

- 14.00 - 14.25** ■ Kinetics and thermodynamics of flexographic-plate polymer interaction with low-molecular liquids
- **A. I. Dzhrvarsheysvili, M.K. Sherstneva, V.Yu. Konyukhov** (MGUP, Moscow, Russia)

- 14.25 - 14.50** ■ Analysis of interferometric data to obtain accurate geometric characterization of engraved cells
- **D. Deganello, T. C. Claypole, D. T. Gethin** (WCPC, Swansea, UK)

- 14.50 - 15.15** ■ Modelling the anilox-plate micro contact
- **D. Bould, S. M. Hamblyn, J.A. Cherry, T.C. Claypole** (WCPC, Swansea, UK)

- 15.15 - 15.40** ■ Wavelet automatic classification system of substrates in packaging
- **A. Sanchez-Alandi, V. de Gracia; S. Otero, C. Gomez** (AIDO, Paterna, Valencia, Spain)

**Session 5A: Non-impact printing**

- 16.10 - 16.35** ■ Effect of drops interactions in ink-jet print quality
- **C. Mercier, M. Peralba, M. Dubé, J-F Bloch, P. J. Mangin** (CIPP, Trois-Rivières, Québec, Canada and LGP2, Grenoble, France)

- 16.35 - 17,00** ■ New ink absorption method to predict inkjet print quality
- **T. Lamminmäki, P. Puukko** (KCL, Espoo, Finland)

- 17.00 - 17.25** ■ Digital paper and print surface topology
- **P. Vernhes, A. Blayo, B. Pineaux J-F Bloch** (LGP2, Grenoble, France)

- 17.25 - 17.50** ■ A lumped parameter model for thermal conductivity of paper coatings
- **P. Gerstner, J. Paltakari, P.A.C. Gane** (HUT, Helsinki, Finland)

Session 4B: The printed dot

- A micro-scale view of optical dot gain in halftone color prints
- **D. Nyström, B. Kruse, Li Yang** (Linköping University, Sweden)

- Correcting method of optical dot gain to full color halftone image printed on white paper
- **M. Nonaka, S. Kitazawa** (Faculty of Engineering, Tokyo Polytechnic University Kanagawa, Japan)

- The modeling of mechanisms of printed dot physical extension
- **Y. Vinogradov, V. Goobankov, E. Borisenko** (St. Petersburg State University of Technology and Design, St. Petersburg, Russia)

- Perceptibility of missing dots and unevenness in print
- **M. Kaukonen, M. Malanin, P. Oittinen** (HUT, Helsinki, Finland)

Session 5B: Printing inks

- Time-dependent rheology effects on print quality using water-based ink compositions
- **S. Williams, S. Pieruccini** (RIT, Rochester, NY, USA)

- Study of the rheological behaviour of conventional, hybrid and UV offset inks
- **M. Kaplanova, K. Remenarova, B. Jasurek, J. Valis** (UPCE, Pardubice, Czech Republic)

- Hydrodynamics of ink transfer and ink tack on porous substrates
- **M. Dubé, F. Drolet, J-F Bloch, C. Daneaultand, P.J. Mangin**, (CIPP, Trois-Rivières, Québec, Canada)

- Flexographic printing ink performance on coated paperboard under elevated temperatures
- **R. Olsson, L. Yang, M. Lestelius** (Karlstad University, Karlstad, Sweden)

9.00 - 9.25 ■ Spectral color reproduction versus color reproduction - **J. Gerhardt, J.Y. Hardeberg** (HIG, Gjøvik, Norway)

9.25 - 9.50 ■ The development of six colour separation algorithms - **E. H. Jewell, T.C. Claypole, B. Palme** (WCPC, Swansea, UK)

9.50 - 10.15 ■ Deriving optimal spectra for standard offset primaries - **A. Kraushaar** (FOGRA, Munich, Germany)

6B: Proofing and standards
■ Anevaluation of color differences and tolerances in soft proofing - **J. Laine** (VTI, Espoo, Finland)

■ Improved proofing method for postage stamps - **E. Novotny** (PNYME, Budapest, Hungary)

■ Implementing process color printing by colorimetry - **R. Chung** (RIT, Rochester, NY, USA)

10.45 - 11.10



7A: Printed functionality
■ Printing process for lithium-ion electrodes elaboration - **F. Medlege A. Blayo, H. Rouault, N. Belgacem** (CEA, and LGP2, Grenoble, France)

11.10 - 11.35 ■ Rotogravure and pad printing of microstructures for electronic applications like oFETs - **W. Till, G. Hübner** (Hochschule der Medien, Stuttgart, Germany)

11.35 - 12.00 ■ An experimental study to identify key factors affecting the performance of RFID tag antennas - **Yung-Cheng Hsieh, Hui-Wen Cheng** (National Taiwan University of Arts, Taipei, Taiwan)

12.00 - 12.25 ■ Carbon black loaded paper: an intelligent substrate for electronic sensors design - **R. Koehly M. M Wanderley, T. Van de Ven, D. Curtil** (MusicTech, McGill University, Montreal, Canada)

7B: Color and quality assessment

■ Achieving color agreement: evaluating the options - **R. Chung, F. Hsu** (RIT, Rochester, NY, USA)

■ Comparing corresponding colors - **L. Mandic, D. Agic, M. Kurecic** (FGA, University of Zagreb, Croatia)

■ Influence of paper and printing process on the visual perception and colorimetric characteristics of newsprint - **T.C. Claypole, E.H. Jewell, N. Wells, P. Casey** (WCPC, Swansea, UK)

■ Process variability: optimization and control - **N. Padalkar, A. Virdhe, R. Oswal** (Design Studio, Thomson Digital, Noida, India)



Session 8A: Cross-media

Session 8B: Special printing

- 13.40 - 14.05** ■ Consumer expectations as drivers of media change - **C. Teljas, A. Jonsson, N. Enlund** (KTH, Stockholm, Sweden)

■ Photoacoustic study of varnished solids printed by different techniques - **M. Drzkova, J. Hejduk, K. Grolichova** (UPCE, Pardubice, Czech Republic)
- 14.05 - 14.30** ■ Designing community-based print products - **K. Grenman, M. Forsell, H. Roschier, M. Ylisiurua** (KCL and HUT, Espoo, Finland)

■ Quality control for printed interference colours - investigation for a basic measuring geometry - **H. Hupp, E. Dörsam** (TU Darmstadt, Germany)
- 14.30 - 14.55** ■ Usercentric approach for designing cross media applications in personal photography - **S. Vihavainen et al.** (Helsinki Institute of Information Technology, Helsinki, Finland)

■ Flipflop and spatial (3D) graphics in lenticular technique - **I. Ziljak, J. Ziljak-Vujic, K. Pap** (FGA, University of Zagreb, Croatia)
- 14.55 - 15.20** ■ Potential applications for hybrid media, the benefits, and the roles in the operations model - **E. Rusko, L. Hakola** (VTT, Espoo, Finland)

■ Printing of functional layers using flexography - **H. Nagel, U. Herzau-Gerhardt** (HTWK, Leipzig, Germany)



Closing session 9 - Keynote lecture 2:

- 15.40 - 16.10** ■ Hybrid document starts to embrace hybrid information - **François Gouverneur** (Xerox, France)
- 16.25 - 16.40** ■ Closing of the conference - **Helene Juhola**
Presentation of the 35th International Research Conference

16.40 - 18.00 **General Assembly** (representatives only)

20.00 - 23.00 **Conference Dinner** (Restaurant La Bastille)

Industrial tour

- **9.00 - 11.30:** Visit of the Minatec Innovation Center, first European center for micro- and nanotechnology innovation

Minatec came into existence at the instigation of CEA-Leti Grenoble and INP Grenoble.

Its ambition is to become Europe's top center for innovation and expertise in micro- and nanotechnology.



<http://www.minatec.com>

Sunday, September 9

- **18.00 - 19.30:** Concert and welcome cocktails at the Grenoble Museum

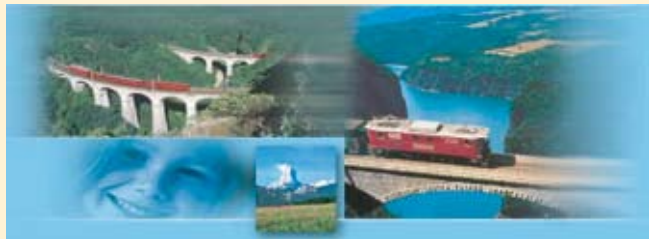
Monday, September 10

- **Partners program** - Visit of the Grenoble Museum



Tuesday, September 11

- **Partners program - 8.45 - 16.00:** An excursion day in Matheysine
Come on board on a typical train straight out of the 30's and be transported to a breathtaking scenery of mountains and lakes.
Following which, you will be invited aboard the Mira, the boat that will take you along the lake for a lunch cruise.



- **20.00:** Dinner at the restaurant La Bastille

ACCESS to EFPG

