

Welcome!



Theater "L'Équilibre", where the welcome reception will take place.

Welcome to the major scientific and technical event of the print and media field, the 44th **iarigai** International Research Conference! Under the general topic of expanding "from printing to manufacturing", the focus of the conference program will be on functional printing, media developments, and print science. As a participant, you will learn about new research findings and topical observations - information that will benefit both industry and the research community. You will also meet new and old colleagues and you will have the opportunity of networking with experts and industry representatives with different specializations. All this will contribute to the development of our field.

We proudly announce that the conference this year will take place in Fribourg, Switzerland, hosted by the iPrint Institute of the University of Applied Sciences of Western Switzerland. The **iarigai** Conference on "Advances in Printing and Media Technology" runs from 10th to 13th September. Some program sessions address specifically also industry participants, notably the special high-level keynote session and the panel discussion on Tuesday, 12th September, where distinguished industry leaders discuss the future of print and media towards digital direct manufacturing or production.

We are convinced that the conference days in Fribourg will be instrumental in the international exchange of knowledge between researchers from various fields as well as between research and industry. Thus, we will all be working together for the further development of the print and media industries.

We look forward to meeting you in Fribourg!

With our best regards,
The Conference Committee

Preliminary conference program*

Day 1

Sunday, 10th September 2017

12:00-17:00 **Board meeting**

18:00 **Welcome reception at "L'Équilibre", Fribourg**
Registration start (Équilibre)

Day 2

Monday, 11th September 2017

09:00-10:30 **Opening session**

09:00-09:10 **Opening of the conference**

Anne Blayo, President of iarigai
Fritz Bircher, Conference director

09:10-09:20 Fribourg University of Applied Sciences, City of Fribourg - Welcome addresses

09:20-09:40 Industrial printing - needs for education

Fritz Bircher, iPrint Institute Fribourg

09:40-09:45 Introduction of new members

09:45-10:00 JPMTR - iarigai scientific publishing platform (Gorazd Golob, Editor-in-Chief)

10:00-10:30 **Invited opening presentation**

Digital Direct Manufacturing
Steve Knight, Digital Direct Technologies

10:30-11:00 Coffee break

11:00-12:30 **Plenary session 1 - New dimensions of industrial printing**

Chair: *tbd*

11:00-11:30 Keynote presentation 1

(tbc)

11:30-12:00 Keynote presentation 2

(tbc)

12:00-12:30 Keynote presentation 3

(tbc)

12:30-14:00 Lunch

14:00-15:15 **Session 2 A – Inkjet printing**

Chair: *tbd*

14:00-14:25 A Model of Inkjet Printing on porous
Substrates incorporating Droplet Impact

Li Yang, Jianghao Liu and Xianfu Wei

14:25-14:50 Ink Jet Matching of Gravure Printed Wood
Grain

*Vinay Anil Turke, Paul Daniel Fleming, Veronika
Husovska and Alexandra Pekarovicova*

Session 2 B – Printing processes

Chair: *tbd*

Calculation of Mesh Depression due to
Squeegee Forces during Screen-Printing Process
Gunter Huebner

On the Measurement of the Pick-up Volume of
Anilox Rollers by Fluorescence

*Felipe Fernandes, Fabio Campanelli and Edgar
Dörsam*

14:50-15:15 Waveform Optimization for Piezo Drop on Demand Inkjet Print Heads by Meniscus Motion Analysis
Johannes Renner and Fritz Bircher

Accelerated Weathering Tests of Parking Vignettes
László Koltai, Csaba Horváth and Eszter Bartha

15:15-15:45 Coffee break

15:45-17:00 Session 3 A – Printed functionality 1

Chair: tbd

15:45-15:10 Co-Developing Services utilizing Printed Functionality

Liisa Hakola, Kaisa Vehmas, Thea Sipiläinen-Malm, Reetta Grenman and Anu Seisto

15:10-16:35 Influence of Drying Temperature on Morphology and Conductivity of Silver

Vincent Faure, Aurore Denneulin, Yahya Rharbi, Albert Magnin and Anne Blayo

16:35-17:00 Inkjet-fabricated Coated Reaction Platform for Colorimetric Glucose Detection

Eveliina Jutila, Risto Koivunen, Roger Bollström and Patrick Gane

Session 3 B – Printing for packaging

Chair: tbd

Investigating Opportunities for 3D Digital Package Prototypes in the Proofing Workflow

Amanda Whyte, Natalia Lumby and Reem El Asaleh

Formulation of a Bio-based and Water-based Ink for Flexography

Fanny Bardot, Charles Bouchard, Olivier Tonnoir, Anne Blayo and Gérard Mortha

Smart Packages by Means of Intelligent Codes

Mustafa Bilgin and Johannes Backhaus

17:15-18:30 General assembly (appointed representatives only)

18:30-19:15 Board meeting (members only)

Day 3

Tuesday, 12th September 2017

09:00-10:15 Plenary session 4 – Media

Chair: tbd

09:00-09:25 Keynote presentation 4
(tbc)

09:25-09:50 Keynote presentation 5
(tbc)

09:50-10:15 Canadian Magazine Publishers – State of the ‘App’
Christopher Smyth and Carman Fan

10:15-10:45 Coffee break

10:45-12:00 Session 5 A – Printing inks

Chair: tbd

10:45-11:10 Predictive Modelling of Demixing and Evaporation from a Roller Nip-distributed Water-in-Ink Thin Film Emulsion using Tack Measurement

Patrick Gane, Carl-Mikael Tåg and Cathy Ridgway

Session 5 B – Print quality

Chair: tbd

Special Examination for the Durability of Text Books

Csaba Horváth

11:10-11:35	The Yin and Yang of Colors – how to calculate the exact complementary color to a specific chromatic Brand Color <i>Michael Abildgaard Pedersen</i>	Quality Testing of Samples from Multi-Layer-Printing Process using the Method of Visual Color Assessment <i>Heike Gute, Edgar Dörsam and Hans Martin Sauer</i>
11:35-12:00	Microscale Halftone Analysis: measurement Framework and Convolution Strategy to differentiate Physical and Optical Dot Gain <i>Louis Vallat-Evrard, Lionel Chagas, Raphaël Passas and Nadège Reverdy-Bruas</i>	Quality Control in Job Printing: adaptable Camera Focus using Power Spectrum <i>Julian Schäfer, Felipe Fernandes and Edgar Dörsam</i>

12:00-13:30 Lunch

13:30-14:45	Session 6 A – Printing functionality 2 Chair: tbd	Session 6 B – Substrates for printing Chair: tbd
13:30-13:55	Analyte Separation for Microfluidic Applications by Surface Charge Modified Functional Pigment Coatings <i>Risto Koivunen, Eveliina Jutila, Roger Bollström and Patrick Gane</i>	The Evaluation of Bio-Based Binders Influence on Offset Print Mottle using GLCM <i>Igor Karlovits, Janja Juhant Grkman, David Ravnjak and Gregor Lavrič</i>
13:55-14:20	A Method to Assess the Cross-Sectional Profile of Fused Deposition Modeling Lines <i>Heng Li, Bruce Myers and Shu Chang</i>	Using ISIT as a Probe to establish Critical Roughness – film thickness relationship <i>Mika Anttila, Martti Toivakka and Patrick Gane</i>
14:20-14:45	Cheap Carbon Nanodots obtained from Waste and their Use as Luminescent Material for (Water-based) Ink-jet Inks <i>Massimo Varisco, Denis Zufferey, Fritz Bircher and Olimpia Mamula Steiner</i>	The Wettability Effect of CMY Water-based Flexographic Printing Inks <i>Zuzanna Żołek-Tryznowska, Joanna Izdebska-Podsiadły and Mariusz Tryznowski</i>

14:45-15:15 Coffee break

15:15-17:00	Plenary session 7 - Introduction & panel discussion on digital direct manufacturing Moderator: Fritz Bircher Several participants from different application domains (tbc)
17:00-17:15	Closing of the conference
17:00-17:10	Wrap up <i>Fritz Bircher, Conference director and Anne Blayo, President of iarigai</i>
17:10-17:15	45 th International Research Conference, Warszawa, September 2018 <i>Presentation by the University of Warsaw (Zuzanna Żołek-Tryznowska)</i>
19:30	Conference dinner

Day 4

Wednesday, 13th September 2017

Transfer by shuttle to the Marly Innovation Center (MIC)

09:00-9:45 **Visit iPrint Institute (MIC)**

09:45-10:05 Coffee break (at the MIC)

Transfer by shuttle

10:15-12:00 **Company visit (tbc)**

Transfer back to the NH hotel at 12h30

Trains leaving Fribourg:

- 12h56 in direction of Geneva (every 30 minutes)
- 13h04 in direction Bern/Zurich (every 30 minutes)