45th iarigai Conference
Advances in Printing
and Media Technology:
From Printing to Manufacturing

3-7 October 2018
Warsaw, Poland

PROGRAMME »
Day 0  |  Wednesday, 3rd October 2018
12:00-17:00  Board meeting (members only)  |  ZTP
18:00-19:30  Registration  |  Hotel IBIS

Day 1  |  Thursday, 4th October 2018  |  ZTP  |  Konwiktorska 2
8:30-9:00  Registration  |  ZTP
   |  Opening session  |  lecture hall 19a
9:00-9:10  Opening of the Conference, President of iarigai
9:10-9:20  Welcome addresses WIP, Dean
9:20-9:25  Welcome addresses Head of ZTP and Director of the Conference
9:25-9:30  Introduction of new members
9:30-9:45  JPMTR, Editor-in-Chief
9:45-10:00  Official photo
10:00-10:25  Coffee break  |  hall 19c
10:25-10:50  Gunter Hübner, Thomas Fischer and Ricardo Martinez, Hochschule der Medien, Germany: Man-Machine Interfaces Using Screen Printing
11:15-11:45  Coffee break  |  hall 19c
11:45-12:10  Petr Roudný and Markéta Držková, University of Pardubice, Czech Republic: The Method for Legibility Assessment and its Application for Model Pharmaceutical Leaflets
12:10-12:35  Michael Abildgaard Pedersen, The Danish School of Media and Journalism, Denmark: Reality Check: What to expect when buying different Print Products for a Campaign – Brand Color Reproduction across Print Substrates and Technologies
12:35-13:00  Yung-Cheng Hsieh, Cheng-Cheng Jiang and Xin-Yi Wong, National Taiwan University of Arts, Taiwan: Key Elements of Developing a Customized Web-to-Print Platform
13:00-14:00  Lunch  |  hall 19c
14:00-14:25  Gregor Lavrič and Igor Karlovits, Pulp and Paper Institute, Slovenia: The Influence of Nanocellulose Addition on Printing Properties of Recycled Paper
14:25-14:50  Tim Claypole (invited speaker), Andrew Claypole, James Claypole and Sarah-Jane Potts, Welsh Centre for Printing and Coating, Swansea University, UK: Plasma Functionalised GNP for Volume Printed Flexible Electronics
14:50-15:15  Mustafa Bilgin and Johannes Backhaus, Bergische Universitaet Wuppertal, Germany: Development of a unidirectional Switchable Photochromic Ink for Smart Packaging
15:15-15:45  Coffee break  |  hall 19c
## Plenary session 4

**PRINTING II: Printing processes and products – industrial processes and product development**  
Chair: Patrick Gane | lecture hall 19a

<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Presenter/Institution/University</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:45-16:10</td>
<td>Dominik Kapović, Branka Lozo and Wilco De Groot, University of Zagreb, Croatia</td>
<td>Interpretation of Ink Tack Stability Testing Results for Improved Offset Printability</td>
</tr>
<tr>
<td>16:25-16:50</td>
<td>Malgorzata Zakrzewska, hubergroup Polska Sp. z o.o., Halina Podsiadlo, WUT ZTP, Poland</td>
<td>Study of the Effect of the Adhesion Promoter on the Coefficient of Friction, COF, of OPP Film</td>
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### 17:00-17:45

General Assembly (appointed representatives only) | lecture hall 19a

### 17:45-18:30

Board meeting (members only) | lecture hall 212

### 19:00

Welcome reception together with IC conference | Restaurant Dom Smaków, INTRACO Building

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## Day 2  |  Friday, 5th October 2018  | ZTP| Konwiktorska 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Presenter/Institution/University</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>9:00-9:40</td>
<td>Opening session of IC, optional for iarigai members</td>
<td>lecture hall 19a</td>
</tr>
<tr>
<td>9:40-10:40</td>
<td>Joined plenary session – iarigai and IC – Chair: Gunter Hübner, Luk Bouters</td>
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<tr>
<td>10:40-11:00</td>
<td>Coffee break</td>
<td>hall 19c</td>
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## Plenary session 5

**PRINTING III: Prints quality**  
Chair: Markéta Držková | lecture hall 217

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<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>11:00-11:25</td>
<td>Patrick Gane, Cathy Ridgway and Dirk Kisters, Omya International AG, Switzerland</td>
<td>Evaluating Contact Angle on Complex Surfaces to obtain a meaningful Surface Energy for Print Adhesion</td>
</tr>
<tr>
<td>11:25-11:50</td>
<td>Christina Bodenstein, Hans Martin Sauer, Felipe Fernandes, Edgar Dörsam and Elisabeth Warsitz, Technische Universität Darmstadt, Germany</td>
<td>Assessing the quality of pad-printed images by evaluating edge sharpness</td>
</tr>
<tr>
<td>11:50-12:15</td>
<td>Ahmad Al Aboud, Edgar Dörsam, Arash Hakimi Tehrani and Dieter Spiehl, Technische Universität Darmstadt, Germany</td>
<td>Using FEM Simulation as a Tool to develop Pad Printing</td>
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<tr>
<td>12:15-12:45</td>
<td>Coffee break</td>
<td>Open space 2nd floor</td>
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### Session 6A

**PACKAGING AND SUBSTRATES II: Substrate and Materials**  
Chair: Marta Gajadhur | lecture hall 217

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<tbody>
<tr>
<td>12:45-13:10</td>
<td>Sandra Rosalen and Johannes Backhaus, Bergische Universität Wuppertal, Germany</td>
<td>Cardboards printed with water based inkjet inks</td>
</tr>
<tr>
<td>13:35-14:00</td>
<td>Jacqueline Stamm, Dieter Spiehl, Jeannine Jaeger, Florian Groher, Tobias Meckel, Beatrix Suess and Edgar Dörsam, Technische Universität Darmstadt, Germany</td>
<td>DNA and DNA Staining as a Test System for the Development of an Aptamer-based Biosensor for Sensing of Antibiotics</td>
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### Session 6B

**PRINTING IV: Printed functionality**  
Chair: Mladen Lovreček | lecture hall 212

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<tbody>
<tr>
<td>12:45-13:10</td>
<td>Eveliina Jutila, Risto Koivunen, Roger Bollström and Patrick Gane, Aalto University, Finland</td>
<td>Overcoming Printing Challenges related to Fabrication of Inkjet-printed Coated Microfluidic Reaction Platforms</td>
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<tr>
<td>13:10-13:35</td>
<td>Zhiqing Xin, Jianghao Liu, Lingya Gu, Yi Fang, Lixin Mo and Li Yang</td>
<td>Surface Energy-guided Patterning for Printed Electronics Applications</td>
</tr>
<tr>
<td>13:35-14:00</td>
<td>Anne Blayo, Nathalie Marlin and Céline Chrétien, Grenoble INP Pagora, France</td>
<td>About Deinking of Paper-based Printed Electronics</td>
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### 14:00-15:00

Lunch | hall 19c
Session 7A
PRINTING V:
Secure printing and 3D Printing
Chair: Fritz Bircher | lecture hall 217

15:00-15:25 Slavtcho Bonev and Sviatoslav Voloshykovskiy, University of Geneva, Switzerland: Secure Printing for Labels and Packaging using Industrial Digital Printers: authentication of printed matrix codes with smartphone cameras

15:25-15:50 Elena Yakovleva, Anton Makarov, Valery Gorbachev and Elena Kaynarova, Saint-Petersburg State University, Russian Federation: Image Watermarking Using a Cover Work with Replicated Elements

15:50-16:15 Linlin Liu, Meng Li, Qiumin Wu, Jie Ma and Xiang Liu, Xian University of Technology, China: Information Construction of MBD-based 3D Additive Manufacturing Process Model

19.00 Dinner with IC members | Restaurant Dom Smaków, INTRACO Building

Day 3 | Saturday, 6th October 2018 | WUT – Main Building | Plac Politechniki 1

9:30-10:00 Transfer by shuttle to WUT, Main Building

10:00-11:30 Official Jubilee Session | Mała Aula

11:30-12:30 Coffee break

12:30-12:50 Prof. Dr Ulrich Hermann, Heidelberger Druckmaschinen AG: Smart factory – future of the graphic arts industry

12:50-13:10 Jacek Kuśmierczyk, The Polish Guild of Gutenberg's Knights: The results of the research of KPMG and PBKG – Modern printing market in Poland


13:30-14:30 Coffee break

14:30-15:30 Panel discussion. Wrap up session

15:30 Transfer by shuttle back to IBIS Hotel

17:45-18:15 Transfer by shuttle to WUT, Main Building

19:00 50th Jubilee Gala | Duża Aula, Main Building of WUT

From 23:00 Transfer by shuttle to IBIS Hotel (every 30 min)

Day 4 | Sunday, 7th October 2018

10:00 Sightseeing tours (optional)

10:30 Museum of King Jan III’s Palace in Wilanów

12:30 Lunch

14:20 Copernicus Science Centre

16:30 Departure to ZTP