



Inkjet Winter Workshop 2022

17 - 28 January 2022

Online Courses

ONLINE

The IMI Europe Inkjet Winter Workshop is the ideal way to learn more about key aspects of inkjet technology, from the basics through to advanced courses on inks, printheads and applications.

Inkjet Academy

Theory of inkjet technology

The Inkjet Academy covers the basic theory behind the many types of inkjet technology used today and aims to give your understanding of the industry an expert start. The course is presented by Dr Mark Bale of DoDx Act and Dr Tim Phillips of Catenary Solutions / IMI Europe.

Inkjet Inks: Materials & Applications

Inks & materials for digital applications

This course gives an overview of the different ink platform technologies in use today, with an emphasis on the practical aspect of materials selection and optimisation for the low viscosity requirement of inkjet printing. Key issues surrounding the integration of inkjet ink technology into industrial printing within a production environment will also be considered. The course is led by inkjet ink and application expert Dr Mark Bale of DoDxAct (formerly of Sun Chemical).

Inkjet Colour Management

Practical colour management for digital printing workflows

For any digital imaging technology, software is fundamental as the printed image is defined by data. This course gives an in-depth overview of the fundamental aspects of digital imaging applications and the software functions needed for this, presented by industry leaders Meteor Inkjet, Inèdit and ColorGATE.

Inkjet Ink Characterisation

Viscosity, dispersions, jetting & surfaces

This course covers rheology and surface tension measurements, particle and dispersion assessment, as well as drop visualisation and print quality analysis. Course leaders include KRÜSS, ImageXpert, Malvern Panalytical and TA Instruments.

Digital Textile Printing

Printheads, images & colour

This course gives an introduction to digital textile printing markets and technology. The main applications for digital textile printing are reviewed, along with the key ink chemistries and integration considerations. Course leaders include Prof Marc Van Parys of University of Ghent, Dr Simon Daplyn of Sun Chemical and Dr Tim Phillips of Catenary Solutions.

Inkjet Drying & Curing

Hardware & chemistry for fixing inkjet inks

This course provides all the information you need about fixing inkjet inks, covering near-IR drying, UV curing and electron beam curing hardware, as well as the required chemistry. The course includes contributions from Adphos, Phoseon, IGM Resins, Catenary Solutions, Sherkin Technologies & i4inkjet.

Inkjet Academy

The Theory of Inkjet Technology

Monday 17 – Tuesday 18 January 2022

COURSE FOCUS

Understanding the basics is essential to any industry's development. The Inkjet Academy one-and-a-half day course covers the theory behind the many types of inkjet technology used today and aims to give your understanding of the industry an expert start.

The course will show you how printheads work, the materials used in their fabrication and the theory of their operation. You will also learn how inks are formulated and used, as well as about ink supply and support systems.

The course examines how drops are formed, travel and behave on the substrate surface. Fundamental aspects of printer operation such as nozzle maintenance and print quality are also covered.

The course assumes a basic scientific knowledge and is designed to provide useful background information for anyone entering the inkjet industry, seeking an update on today's technology or looking for further fields of development.

Monday 17 January 2022

13.20 – 13.30 Registration

13.30 Course Begins

Introduction to inkjet

- Course overview
- Types of inkjet technology
- Drop on demand technologies
- Thermal and piezo inkjet
- Ink technologies: aqueous, solvent oil, phase change and UV cure
- Materials and ink formulations
- Evolution of inkjet markets
- Desktop and Industrial markets
- Inkjet patents

Industrial inkjet printheads

- Continuous inkjet
- Summary of current piezo printheads
- Properties and key features
- Drop ejection frequency, crosstalk, reliability and life issues
- Choosing a printhead starting from the application performance
- Printhead trends such as Si-MEMS/TFH

Inkjet inks

- Inkjet ink design
- Understanding the inkjet printing process
- Reliability
- Drop formation
- Properties influencing piezo inkjet ink performance
- Testing an ink for reliability: methods & characterisation
- Materials and dispersion theory

17:30 Session ends

Tuesday 18 January 2022

08.30 Session Begins

Creating a reliable industrial inkjet system

- Integration issues
- System design
- Ink supply
- Nozzle maintenance
- Drop break-off and placement accuracy
- Drop impact and spread
- Mist control
- Factors affecting print quality
- Printhead-ink-substrate
- Greyscale methods
- Drop detection
- Banding, single pass issues
- Drying effects
- Missing nozzle detection
- Missing nozzle compensation

12.30 – 13.30 Break

13.30 Session begins

Industrial inkjet markets

- The digital proposition and benefits
- Industrial inkjet business model
- Infrastructure barriers to entry
- The inkjet successes
- The numbers
- Future "stars"

Challenges to create a successful industrial inkjet solution

- Textiles
- Packaging and labelling
- 3D printing
- Decorative surfaces
- Coatings
- Life sciences
- Electronics
- "Additive" manufacturing processes

Emerging Technologies

- Kodak Stream
- Memjet
- HP PageWide technology
- Landa Nanography
- Lead-free piezo
- Speed & resolution trends

17.30 Course ends

COURSE LEADERS

Dr Mark Bale,

Director, DoDxAct, UK

Dr Mark Bale is the founder of DoDxAct Ltd in Somerset, United Kingdom where he consults in all aspects of inkjet R&D from ink formulation and manufacture through jetting & process integration to final application optimisation. His experience takes in production inkjet, wide-format graphics, labels & packaging, decorative surfaces, electronics manufacturing, product coding and 3D printing.



Dr Tim Phillips, Founder & Director

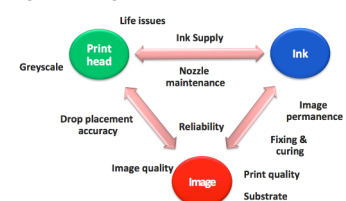
Catenary Solutions, UK

Tim Phillips has extensive experience in challenging inkjet integration projects, spending eight years working at Xenopia Technology Ltd, the leading inkjet solutions company that was acquired by Sensient in 2015. This involved working with a wide range of companies developing technology for new applications including textiles, ceramics, packaging, décor and functional material deposition for printed electronics and biomedical uses. Tim founded Catenary Solutions in 2015 to bring this knowledge of digital solution development and marketing to a wider audience.



INK JET ACADEMY

Ink jet is a system



Pretty much everything interacts with everything else

Inkjet Ink Characterisation

Viscosity, Dispersions, Jetting & Surfaces

Wednesday 19 – Thursday 20 January 2022

COURSE FOCUS

Development of high quality inks and fluids for inkjet applications requires state-of-the-art characterisation equipment and techniques. From fundamental ink properties such as viscosity and surface tension, which have a crucial impact on jetting performance, through analysis of particulates dispersed within the ink, understanding these properties is key to getting the best out of an ink development project. In addition, it is vital to understand how the developed ink actually behaves, both on ejection from the printhead and when landing onto the substrate of choice.

The Inkjet Ink Characterisation course gives an excellent introduction to these essential areas of study, presented by industry experts from leading suppliers and institutions in the field. The course will give you the basic foundations as well as a more detailed understanding of the vital equipment and techniques.

Wednesday 19 January 2022

08:50 - 09:00 Registration

09:00 Course begins

Basic property measurements - surface tension

Dr Thomas Willers, KRÜSS

- Surface tension - introduction
- Relevance to droplet formation and spreading in inkjet printing
- Interplay of surface tension and viscosity in drop formation
- Impacts on wetting
- How to optimise ink-substrate adhesion and spreading
- Interfacial rheology and its relevance to drying
- Theories and methods of measurement - compared and contrasted
- Application examples from inkjet industry

Optimising ink rheology for printing applications - Continued

Dr Carlos Gracia Fernández, TA Instruments

- Rheological test methods for inkjet inks and processes
- Practical examples

12:30 - 13:30 Lunch

13:30 Session begins

Monitoring and controlling pigment particle size

Dr John Ddungu, Malvern Panalytical

- Understanding the links between particle size and ink performance
- Overview of light scattering techniques for measuring particle size
- Pros and cons of different measurement techniques and approaches
- Practical examples

Evaluating and improving dispersion stability

Dr Stephan Cairns, Malvern Panalytical

- Understanding stability mechanisms for ink dispersions
- Factors controlling stability – particle size, steric effects, zeta potential and viscosity
- How to make stable dispersions – selecting the right approach for your ink
- Practical examples

Assessing the impact of polymer structure on ink performance

Dr Diogo Fernandes, Malvern Panalytical

- Understanding the role of polymers for inkjet applications
- Correlating polymer properties with polymer solution behaviour including viscosity
- Measuring molecular weight, molecular structure and intrinsic viscosity
- Practical examples

17:00 Session ends

Thursday 20 January 2022

09:00 Session begins

Jetting and print quality analysis

Kyle Pucci ImageXpert

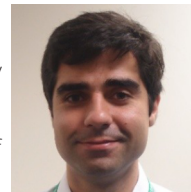
- Introduction to drop analysis
- How is in-flight analysis used?
 - Drop formation
 - Reliability
 - Misting
 - Nozzle-to-nozzle consistency
 - Drop measurement
- Simple application examples
- Overview of techniques
- Fundamental measurements
- Practical demonstration
- Introduction to print quality analysis
- How is print quality analysis used?
 - Dot properties
 - Line properties
 - Solid area quality
 - Colour registration
 - Ink interaction
- Overview of techniques
- Practical examples

12:30 Course ends

COURSE LEADERS

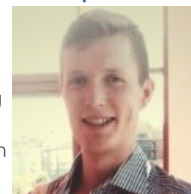
Dr Diogo Fernandes, Product Technical Specialist
Malvern Panalytical, UK

Dr Diogo Fernandes has been awarded a Forensic Chemistry BSc degree from ISCSEM and a doctoral degree in Materials Science from the University of Central Lancashire, where he explored different methods to synthesize and characterize novel types carbogenic nanoparticles.



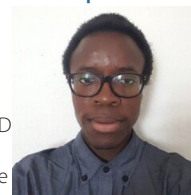
Dr Stefan Cairns, Product Technical Specialist
Malvern Panalytical, UK

Dr Stefan Cairns completed a PhD at the University of Edinburgh, specialising in ring opening polymerisation, where he became an expert in monomer, polymer and catalyst synthesis, and characterisation.



Dr John Ddungu, Product Technical Specialist
Malvern Panalytical, UK

Dr John Ddungu obtained an integrated master's degree in Chemistry at the University of Birmingham followed by a PhD in Chemistry from the University of Strasbourg where he explored the synthesis and characterisation of silicon-based nanoparticles for medical diagnostic applications.



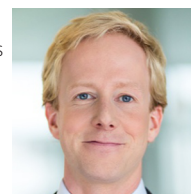
Dr Carlos Gracia Fernández, Responsible for Applications: Rheology and Thermal Analysis
TA Instruments, Spain

Carlos completed Master's degrees in Applied and Condensed Matter Physics, and a PhD in Applied Physics. Since 2007 he has been a senior scientific support specialist in rheology, thermal analysis and thermophysical properties at TA Instruments.



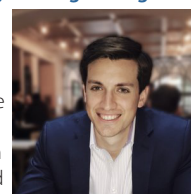
Dr Thomas Willers, Head of Applications & Science
KRÜSS, Germany

Dr Thomas Willers received his PhD degree in experimental physics at the University of Cologne. In 2012 he joined KRÜSS GmbH at its headquarters in Hamburg where he is now head of the department for Applications & Science.



Kyle Pucci, Applications Engineering Manager
ImageXpert, USA

Kyle graduated in 2014 from Villanova University with a BS in Mechanical Engineering. He specialises in integrating controllers and hardware with the JetXpert dropwatcher and offering support, installation, and training.



Inkjet Inks: Materials & Applications

Inks and Materials for Digital Applications

Thursday 20 – Friday 21 January 2022

COURSE FOCUS

Building on the back of the success of wide format graphics applications, industrial inkjet printing has penetrated many market areas by utilising a wide range of different ink chemistry approaches.

This course gives an overview of the different ink platform technologies in use today, with an emphasis on practical aspects of materials selection and optimisation for the low viscosity requirement of inkjet printing. Looking from the application viewpoint the potential ink solutions are compared and contrasted. Key issues surrounding the integration of inkjet ink technology into industrial printing within a production environment are also considered.

The course is aimed at developers wishing to adopt inkjet technology in their industrial production processes, or those who are already skilled in one area and are looking to understand the wider potential of inkjet chemistries available.

Thursday 20 January 2022

13:20 - 13:30 Registration

13:30 Course begins

Introduction & context

- How inkjet ink has evolved
 - Sustainability & the drive back to water
- The modern process
 - Ink as the enabling technology
- Market considerations
 - OEM versus aftermarket supply
- Basic ink chemistry comparison
 - What's inside
 - The influence of the printhead
- Making sure it's right
 - Checking the basic properties

17:00 Session ends

12:30 - 13:30 Lunch

13:30 Session begins

Application examples – ink selection

- Practical examples of ink selection by application area, e.g.
 - Wide format graphics
 - Production print
 - Textiles
 - Ceramics
 - Decor
 - Corrugated board & paper packaging
 - Flexible (plastic) Packaging
 - Electronics
 - 3D printing
 - Electronic Materials

17:00 Course ends

COURSE LEADER

Dr Mark Bale, Director
DoDxAct, UK

Mark Bale is the director of DoDxAct, an inkjet technology consultancy specialising in process engineering, head-fluid optimisation and laboratory prototyping of inkjet processes for a range of industrial applications. He received his MPhys in physics (1997) and his PhD in Nanoscale Physics (2001) both from the University of Birmingham. Having worked in Sun Chemical's UK Inkjet R&D Labs for 10 years he brings ink expertise and process knowhow to the application of ImageXpert laboratory equipment to solve real life inkjet printing challenges.



Friday 21 January 2022

09:00 Session begins

Ink types & materials choices

- Radiation-curable
 - The ubiquitous all-rounder
 - Focus on free radical UV
- Aqueous
 - Function takes over from simple colours
- Solvent
 - From hard CIJ inks to 'Eco' graphics
- Oil
 - A good option for absorbing substrates
- Hot-melt
 - A great route to process resilience
- Hybrids
 - Clever chemistry as the best of both worlds



Digital Textile Printing

Applications, Ink Chemistry & Integration

Monday 24 – Tuesday 25 January 2022

COURSE FOCUS

Over the last decade, digital textile printing using inkjet technology has been introduced and is growing rapidly, especially for apparel printing. Many of the technical and material challenges have been overcome and the increasing emphasis on cost saving, manufacturing flexibility and following market trends is generating a surge of interest.

This course will give an overview of the industry - the markets, applications and technology. The overall market dynamics and technology requirements for each digital textile application will be described. The required ink chemistries will be reviewed and their use in inkjet printheads and pre- and post-processing requirements detailed. Integration of inkjet technology within a production environment will also be considered, as well as the challenges of inkjet system design to make the process production-compatible.

Monday 24 January 2022

13:20 - 13:30 Registration

13:30 Course begins

Digital textile printing market and applications

Prof Dr em Marc van Parys, University of Ghent

- Segmentation of the market - home textiles, apparel, industrial applications & soft signage
- Growth of digital textile printing in the different segments
- Applications and key players
- Market developments under the influence of digital inkjet printing technology
- Business drivers
- Sustainability
- Future directions

17:00 Session ends

Integration for digital textile printing

Dr Tim Phillips, Catenary Solutions

- Hardware integration
- Printhead technologies
- Printhead choices
 - Suppliers
 - Performance
 - Life issues
- System design
 - Ink supply systems
 - Nozzle maintenance
 - Designing for reliability
- Architecture options
- Printhead motion systems
- Web handling and textile transport
- Testing
- Print quality

17:00 Course ends

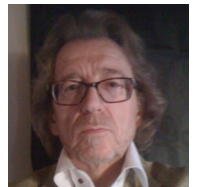
COURSE LEADERS

Prof Dr em Marc van Parys

Professor of Textiles, University of Ghent, Belgium

Prof Van Parys is a Doctor in Chemistry and Professor of Textiles at University College Ghent and University of Ghent. He is Head of the Textile Department and the textile research Lab TO2C. Marc is also president of UNITEX (an SME association of Textile in Belgium and Netherlands), organiser of international congresses and chief editor of the UNITEX journal.

Marc is also a senior consultant and member of the board at Centexbel, as well as being owner and founder of TexZeppelin - a consultancy company dealing with emerging technologies including digital printing, UV-LED coating/printing, plasma and laser treatment and nanotechnology.



Dr Simon Daplyn

Product Marketing Manager, Sun Chemical, UK

Dr Simon Daplyn Joined Sun Chemical in July 2020 as part of the acquisition of Sensient Imaging Technologies and is responsible for management of product and marketing output.

Having worked in digital print for over 15 years, Simon has been responsible for development, commercialization, sales and marketing of a wide range of digital textile inks. Simon has been involved in digital textiles in some capacity for 20 years.



Dr Tim Phillips, Founder & Director

Catenary Solutions, UK

Tim Phillips has extensive experience in challenging inkjet integration projects, spending eight years working at Xenia Technology Ltd, acquired by Sensient in 2015. This involved working with a wide range of companies developing technology for new applications including textiles, ceramics, packaging, décor and functional material deposition for printed electronics and biomedical uses. Tim founded Catenary Solutions in 2015 to bring this knowledge of digital solution development and marketing to a wider audience.



Tuesday 25 January 2022

09:00 Session begins

Digital textile inks

Dr Simon Daplyn, Sun Chemical

- Materials selection
- Dyes vs pigments
- Designing ink for industrial printheads
- QC and performance
- Application requirements
- Inkjet printing process
- Designing for digital
- Ink and fabric selection
- Processing requirements
 - Fabric preparation
 - Fixing
 - Washing
- Colour characteristics (ink and print)
- Ink maintenance and support requirements

12:30 - 13:30 Lunch

13:30 Session begins



Inkjet Colour Management

Practical Colour Management for Digital Printing

Wednesday 26 - Thursday 27 January 2022

COURSE FOCUS

For any digital imaging technology, software is fundamental as the printed image is defined by data, rather than by a physical object like a roller or screen. Inkjet printing software accepts design image files as its input and needs to transform this into data understood by the printheads as an instruction either to fire, or not to fire, a nozzle actuator at a given time. This complex task requires image handling and colour management to ensure consistent colour, especially for advanced decorative applications. The printing software also needs to split the data into

suitable channels directed to each printhead in the system. It also needs to handle extremely high data rates to drive today's high resolution, high speed printheads, especially in single pass printing applications with multiple colours and large image sizes.

IMI Europe's Inkjet Printing Software course gives an in-depth overview of the fundamental aspects of digital imaging applications and the software functions needed for this, presented by leading companies in the field.

Wednesday 26 January 2022

08:50 - 09:00 Registration

09:00 Course begins

An introduction to colour - colour management basics

- Colour perception
- Colour communication
- Device colour spaces (RGB/CMYK/CMYK+Gamut extending colours)
- How ICC profiles work
- Rendering intents
- Influence of light / Viewing conditions
- Colour difference metrics – What is Delta E and what does it mean?
- How to communicate colours accurately – CMYK/ RGB, Lab and spectral data
- Communicating colours with different file types (TIFF vs. PDF vs. others)

Colour measurement

- Overview of current devices
- Which device should be used for certain applications.
- Is there a "best" device? Hint: no.

12:30 - 13:30 Break

13:30 Session begins

Printer calibration

- Prerequisite: Know your printer behaviour
- Practical tips for different ink types – UV/solvent/ water based
- Influences of screening methods
- Linearisation / G7 calibration
- What to look for and what to avoid in order to accurately optimise ink laydown
- Identifying potential measurement issues
- Profiling and profile settings
 - Black generation methods / Ink saver
 - ICC structure
 - Identifying potential problems
 - Evaluation of a profile
 - Gamut viewers and what they can be used for

17:00 Session ends

Thursday 27 January 2022

09:00 Session begins

ICC profiles

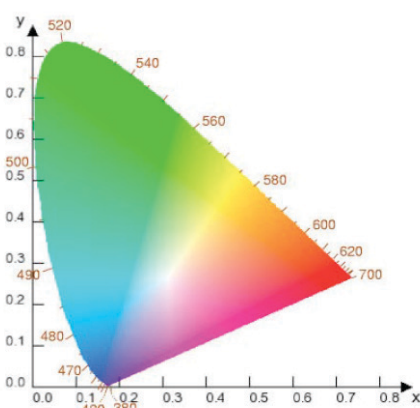
- Input profiles for RGB, CMYK and greyscale
- Impact of input settings (Profiles and Rendering intents)
- Profile Connection Space or Device Links? What are the differences, what are the benefits?
- Output/printer profile options
- How to setup an automated workflow.

Spot colours in digital workflows

- Dedicated ink channel vs. colour replacement
- What does Pantone coverage mean?
- Assessing the results before printing (Color Preflight)
- Proofing / Softproof

Summary and recommendations - QA

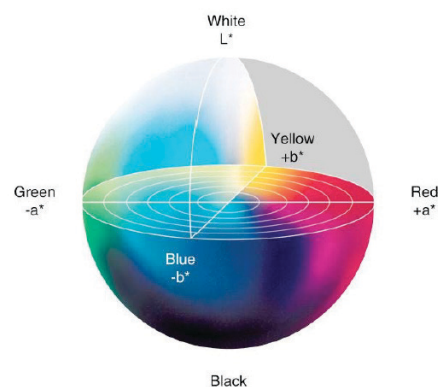
12:30 Course ends



COURSE LEADER

Gerrit Andre, Trainer and Product Specialist
ColorGATE

Gerrit joined ColorGATE in 2007 and initially served in the technical service team. Since 2012 he is member of the business development team and performs pre-sale services and consultancy. As a FOGRA certified Digital Printing Expert he acts as a consultant and trainer for workflow and colour management requirements of partners and customers for commercial and industrial digital printing applications.



Inkjet Drying & Curing

Hardware & Chemistry For Fixing Inkjet Inks

Thursday 27- Friday 28 January 2022

COURSE FOCUS

The Inkjet Drying & Curing course is intended to cover all of the necessary hardware and ink chemistry for fixing inkjet inks. The course will cover drying of aqueous and solvent inks, comparing different possible methods and including near-infrared (NIR) drying, ultra violet light (UV) curing and electron beam (EB) curing. The course covers both hardware and chemistry in detail. The drying section will review the ink drying process, including adhesion, penetration into the substrate, rub resistance and print quality. The differences in behaviour on porous and non-porous media will be discussed.

Wavelength, absorption characteristics of inks, typical substrates and coatings will also be covered. The advantages and disadvantages of potential ink drying techniques will be reviewed.

The course gives an in-depth introduction to the UV curing process and its relevance to digital inkjet printing. The course introduces the fundamental chemistry and hardware required, assessing the pros and cons of each type available on the market. Finally the emerging technique of EB curing will be introduced, and its potential advantages reviewed.

Thursday 27 January 2022

13:20- 13:30 Registration

13:30 Course begins

Drying aqueous and solvent inks

James Burbidge, Adphos Innovative Technologies

- Introduction
 - What is dry, and how dry is dry?
 - Ink makeup
 - Differences in inkjet heads and resulting chemistry
- The principles of:
 - Wetting & Setting
 - Absorption in Porous & non-porous Media
- Paper and ink characteristics
 - Spectral absorption of inks
 - Spectral absorption of paper
- Defining durability, liquid removal and measuring it
 - What are we measuring
 - Test procedures
- Comparison of systems
 - Drying processes
 - Dryer designs
 - Homogeneity due to focusing and airflow management
- Application examples
 - Machine layout and its influence

17:00 Session ends

Friday 28 January 2022

09:00 Session begins

UV curing fundamentals

Rob Karsten, Phoseon Technology

- Introduction to UV curing
 - The UV curing process
- Characterising UV sources
 - Wavelength
 - Peak irradiance
 - Energy density
 - Air-cooled systems
 - Water-cooled systems
- Application areas
 - Full cure
 - Pinning
 - Low migration
- Benefits of UV curing
- Latest advances in UV technology

12:30 - 13:30 Break

13:30 Session begins

UV cure chemistry

Dr Stuart Palmer, IGM Resins

- UV cure mechanisms
 - Free radical
 - Cationic
- Photoinitiator chemistry
- Monomer chemistry
- Oligomers and additives
- Curing issues
 - Oxygen inhibition
 - Other issues
- Print quality effects with UV inks

UV curing considerations

Dr Tim Phillips, Catenary Solutions

- Physics of UV curing
- UV source comparison
- Safety considerations
- Integration challenges
 - Heat management
 - Stray UV
- Oxygen inhibition
- Single pass/multipass systems

Electron beam curing

Donal O'Sullivan & Adam Strevens, Sherkin Technologies & i4inkjet

- Introduction to electron beam (EB) curing
 - The EB curing process
 - Chemistry and physics
 - EB Sources
 - Lamps
 - Systems
- Characterising EB Sources
 - Beam current
 - Dose
 - Voltage
 - Power
- Application areas
 - Conventional printing
 - Inkjet printing
 - Coating and varnishes
 - Migration results
- Benefits of EB curing
- Comparison with UV technology
- Future perspectives

17:00 Course ends

COURSE LEADERS

James Burbidge, Technical Director Europe - Print Technology

Adphos Innovative Technologies, Germany



James has had much experience in his many years in the digital printing field. He now enhances the performance & productivity of production lines by integrating Adphos technology into the process.

Rob Karsten, Regional Director EMEA

Phoseon Technology, USA



Rob Karsten is the Regional Director EMEA for Phoseon Technology, the world leader in UV LED technology. He has been with Phoseon from the beginning and has been responsible for building their business in Europe.

Dr Tim Phillips, Founder & Director Catenary Solutions

Tim has extensive experience in challenging inkjet integration projects, developing technology for new applications including textiles, ceramics, packaging, décor and functional material deposition for printed electronics and biomedical uses.



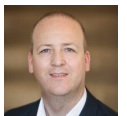
Dr Stuart Palmer, Sales Manager IGM Resins, UK

Stuart worked in UV-curing technology at Autotype and Fujifilm SIS. He then spent 10 years working in chemical distribution. He joined IGM Resins, a company dedicated to producing raw materials for UV curing, in 2008.



Donal O'Sullivan, Managing Director Sherkin Technologies, UK

Donal has extensive experience in the implementation and support of electron beam-based processes. He has been steering electrons to deliver industrial solutions in food packaging, flexible electronics, medical devices, and semiconductors, for over 25 years.



Adam Strevens, Director I4inkjet, UK

Adam has previously worked at Cambridge Display Technology Ltd. and Xaar Plc. He is now Director of i4inkjet Ltd. which provides the inkjet industry patent review service 'Directions' and offers inkjet consultancy under 'Pivotal inkjet resources'.





How to register

Please register on-line via our website:
www.imieurope.com

Registration for **the IMI Europe Inkjet Winter Workshop is priced per person, per course**, with discounts available if more than one ticket is booked at the same time.

We will email your registration confirmation together with an invoice with payment details.

Number of Tickets	Price Per Ticket
1	€ 450
2	€ 400
3	€ 360
4	€ 340
5	€ 315
6	€ 295
7	€ 280
8	€ 270
9	€ 260
10	€ 250

Discounts

If you would like a quotation please email enquiries@imieurope.com with your requirement. Where multiple discounts apply we will allocate the two largest discounts to the total.

Booking policy

Cancellations will receive a 50% refund if made more than two weeks prior to the start of the event (i.e. on or before 3 January 2022). After this time, no refunds can be made, but your registration may be transferred to another IMI Europe or IMI Inc event at no charge. Name changes for a registration may be made at any time, free of charge, but please let us know before the event so we can update our records.

Extra Information

We will be providing Zoom meeting links & passwords to all registrants of our courses. Zoom is widely available meeting software that is free to download. We recommend you use the download (app) version, which is available for PC, Mac and mobile platforms. See Zoom Help for more information.

If your internet connection is suitable for streaming video you should have no problems - if you are limited in bandwidth you will have the option of using audio only and following the slides on the downloaded version. We recommend you use computer audio for the session - either speakers or headphones to hear and the computer microphone if you need to speak (you can use text chat as well). You can test this before the meeting starts.

Please ensure you have logged in and joined the meeting at least 10 minutes before the course is due to start to ensure we can keep to our scheduled timings.

During the course presentations you will be able to ask questions both publicly (either verbally or with group chat) and privately (with chat directly to the course presenter which they can answer later). There will also be group chat options during the breaks so you can network with the presenters and other registrants.

Timetable

	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
Monday 17 January							Inkjet Academy				
Tuesday 18 January		Inkjet Academy				Break	Inkjet Academy				
Wednesday 19 January		Inkjet Ink Characterisation				Break	Inkjet Ink Characterisation				
Thursday 20 January		Inkjet Ink Characterisation					Inkjet Inks: Materials & Applications				
Friday 21 January		Inkjet Inks: Materials & Applications				Break	Inkjet Inks: Materials & Applications				
Monday 24 January							Digital Textile Printing				
Tuesday 25 January		Digital Textile Printing				Break	Digital Textile Printing				
Wednesday 26 January		Inkjet Colour Management				Break	Inkjet Colour Management				
Thursday 27 January		Inkjet Colour Management					Inkjet Drying & Curing				
Friday 28 January		Inkjet Drying & Curing				Break	Inkjet Drying & Curing				