



# Digital Printing Presses 2016 Conference

**May 2-3, 2016**

## Ink Jet Academy

**May 4-5, 2016**

**The Florida Hotel & Conference Center  
Orlando, Florida, USA**

Digital printing is truly entering a new era as technology developments have enabled direct product decoration, functional printing, product manufacturing and other applications impossible with conventional printing or earlier generations of digital printing.

Digital printing advancements (print technologies, inks, materials, substrates, etc.) along with expansion of applications and evolving communications paradigms are just some of the factors reshaping the printing industry as it transitions from analog to digital and develops a new look. What will the printing industry look like and who will be the key players by 2020? These intriguing questions and others will be explored at IMI's **Digital Printing Presses 2016 Conference**.

IMI's **Digital Printing Presses 2016 Conference** will provide a comprehensive review of digital printing opportunities, requirements, challenges and potential solutions for major new applications plus those traditionally using screen, flexographic, gravure and offset printing. The program will investigate the impact of trends such as:

- 3D Production Printing
- Document & Product Personalization
- On-Demand Production of Documents/Products
- Smart Labels, Interactive Packaging, etc.
- Decorated Consumer Products
- Medical Implants, Tissue, Organs, etc.
- Cultural Analog to Digital Transition
- Mass Customization
- Printed Statements, Bills, Newspapers, etc. vs. Online Delivery
- Printed Electronics, Displays, Solar, Panels, etc.
- Ceramic Tiles, Textiles, Flooring, Wall Covers, etc.
- Personalized Medical & Bio-Medical Products
- Electronic Social Media vs. Written Communications
- & Much More!

Leading industry experts and end users will address the current state-of-the-art, evolving printing requirements, market opportunities, enablers for market penetration, barriers and more. Application sectors such as Product Decoration, 3D Printing, Product Manufacturing, Packaging, Tag/Tickets/Labels, Documents, etc. will be included. IMI's **Digital Printing Presses 2016 Conference** program will provide a unique opportunity to obtain an assessment of multiple major evolving digital printing technology, market and application trends that are shaping the print industry of the future.

The **Ink Jet Academy** is a course covering the basic theory of all the diverse types of ink jet technology in use today. Learn how the printheads work, what materials are used in their fabrication and the theory of operation. Learn about inks and media, how they are formulated and the supply and support systems. This one and one half day course, continuously updated, is aimed at people in the industry who would like an up to date overview of the ink jet technology used today.

### Conference Displays & Suppliers' Forum

IMI's **Digital Printing Presses 2016 Conference** provides the opportunity to have a **complimentary display space** to exhibit your products, technology or services and to give a commercial **5-minute Suppliers' Forum presentation**.

IMI will cooperate with all interested parties to provide appropriate space so products can be displayed and demonstrated during the conference breaks and receptions.

**To reserve your complimentary display space and Suppliers' Forum presentation slot**, please register online and check off the box indicating your participation OR complete the registration form on page 3 and fax to +1-207-235-2226 OR send an email to [al@imiconf.com](mailto:al@imiconf.com)

### Make Plans for

#### Security Printing 2016 Conference

**May 4-5, 2016**

**The Florida Resort & Conference Center  
Orlando, Florida, USA**

#### Thermal Printing 2016 Conference

**May 9-11, 2016**

#### Digital Manufacturing 2016 Conference

**May 11-13, 2016**

**The Saguaro Scottsdale Hotel  
Scottsdale, Arizona**



# Digital Printing Presses 2016 Conference

Emerging Applications  
in

- Product Decoration & Functional Printing
- 3D Printing & Product Manufacturing
- Packaging, Tags/Tickets/Labels & More!

**May 2-3, 2016**

The Florida Hotel & Conference Center  
Orlando, Florida, USA

## Monday, May 2, 2016

8:00 a.m. Conference Registration

9:00 a.m. Session 1  
**The Evolving Printing Industry**

### Welcome & Introductions

Alvin G. Keene, President, Information Management Institute, Inc., Carrabassett Valley, Maine  
Conference Chairman: Mike Willis, Managing Director, Pivotal Resources Limited, Cambridge, UK

### Digital Presses Are Here Within A New Production Paradigm

Mark Hanley, President, I.T. Strategies, Hanover, Massachusetts

- Electrophotography & Inkjet Presses are Multi-sectoral across Labels, Print, Communications, Packaging, Ceramics and Textiles et al
- But There is a Slow Path to Manufacturing Integration
- And Economics are in Transition for Digital Presses

### Inkjet Presses – Higher Resolution, Print Speeds, Data Rates, Different Shapes: What's Next? Challenges Facing Manufacturers

Debbie Thorp, Business Development Director, Global Inkjet Systems, Cambridge, UK

- Billions of Pixels/sec
- Printhead Density Issues
- Missing Nozzle Strategies
- Rotating Images
- Printing on all Sorts of Shapes

### Year of the Commercial Inkjet Press – A drupe Primer

James Gill, Account Director, Fujifilm Dimatix, Lebanon, New Hampshire

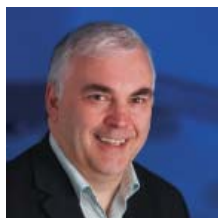
- How Ink Jet Got to Where It Is
- drupa Expectations and Pre-Announcements
- Market Hurdles & Expectations

12:00 Noon Networking Luncheon

**To Register Online**

Visit

**[www.imiconf.com](http://www.imiconf.com)**



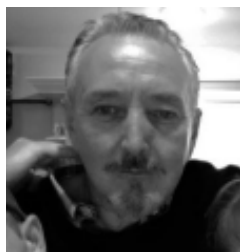
Conference Chairman  
Mike Willis  
Pivotal Resources



Mark Hanley  
I.T. Strategies



Debbie Thorp  
Global Inkjet Systems



James Gill  
Fujifilm Dimatix



Patti Smith  
Eastman Kodak



Randy Vandagriff  
Eastman Kodak

2:00 p.m. Session 2  
**Development Drives Adoption**

### Yes. This is Inkjet! – Technology Advancements Expand Market Opportunities

Patti Smith, Sr. Director, Strategy and Partnerships, Enterprise Inkjet Systems Division and Randy D. Vandagriff, VP, Enterprise Inkjet Systems, Research and Development, Eastman Kodak, Dayton, Ohio

- Respected analysts, Smithers Pira, frame the 2015 Inkjet Market at \$65B with 12.7% CAGR
- But technology developments & product introductions are sure to dictate actual scope and rate of market expansion
- The wide spectrum of digital printing applications have varying performance requirements such as:
  - High productivity & reliability for traditional publishing & commercial print
  - Demanding image quality and challenging substrate range for packaging & labels
- Technology advancements in CIJ (continuous Inkjet) are moving production inkjet into mainstream of commercial printing, packaging and even home décor
  - CIJ is now capable of generating smaller drop size & precise placement accuracy to produce higher resolution, clean lines and detailed definition
  - Ink chemistry inventions enable high resolution inkjet printing on paper and plastic substrates using environmentally-friendly, food safety compliant aqueous inks
- These advancements coupled with lower running costs & application-specific solutions will influence adoption rate & broaden the range of market opportunities
- Yes. This is Inkjet!

## The Technology Battle among Digital Printing Presses

George Gibson, Director for Marketing Strategy, PARC, a Xerox Company, Rochester, New York

- The Major Technology Alternatives: Dry Toner, Liquid Toner & Ink Jet in its Many Forms
- Traditional Trade-offs
- What's on the Horizon?
- A Framework for Decision Making

### Wide Format Inkjet:

#### The User Experience

Dan Marx, Vice President-Markets & Technologies, Specialty Graphic Imaging Association (SGIA), Fairfax, Virginia

- Wide Format Inkjet is "Go To" Technology for Broad Variety of Specialty Graphics Applications
- BUT Technology & User Needs NOT "Locked in Place"
- Updates
  - How Wide Format Technology is being used
  - What Markets & Applications are Being Used
- Direct From the User Information on New Product Development Suggestions
  - Speed vs. Quality
  - Interest in Single Pass Inkjet
  - Industrial Applications
  - Current Industry Challenges
  - Wish List for Future Capabilities
  - & More!

**Suppliers' Forum 1:** 5-Minute Presentations Related To Digital Press Technology, Capabilities, Services, New Product Introductions, etc. Suppliers' Forum is open to all Conference Registrants.

5:30 p.m. Networking Reception in Display Area

## Tuesday, May 3, 2016

9:00 a.m. Session 3

### Emerging Markets & Opportunities:

#### Digital Printing Presses Role in Smart Packaging

George Gibson, Director for Marketing Strategy, PARC, a Xerox Company, Rochester, New York

- Making the Package "More than the Stuff that Holds the Stuff"
- The Taxonomy of Smart Packaging
- Smart Media
- Smart Design
- Added Smart Components
- Enabling Technologies: Near Term and Transformational

## Low Cost High Resolution Inkjet Label Printing Incorporating Smart Materials

Dr. Alan L. Hudd, Director & Founder, Alchemie Technology, Cambridge, UK

- Requirements for High Quality Label Printing
- Inkjet Compromises of Resolution vs. Speed vs. Cost
- Combining Low Cost High Resolution Inkjet Printheads with Digital Selectively Patterning Pre or Post Jet Technology
- Thermal Inkjet & Jetronica Technologies
- Creating New Opportunities to Jet High Resolution Graphics with Difficult Smart Materials



Alan Hudd  
Alchemie Technology



Tony Carignano  
PCT



Dan Marx  
SGIA



John J. Kuta  
BDT



George Gibson  
PARC  
A Xerox Company

## UV vs. EBeam Ink Jet Ink Curing in Narrow to Intermediate Web Application Space

Anthony (Tony) Carignano, Sales & Marketing Specialist, PCT Engineered Systems LLC, Roswell, Georgia

- UV/EB Curing Technologies' Growth Driven by Inherent Advantages of 100% Solid Resin Chemistry over Organic Solvent & Water Based System
- Comparison of UV vs. Ebeam for Surface Curing Applications
- Anatomy of an Electron Beam
- Advances in Ebeam Technology Integration for Low Migration Printing and Converting Applications
- Value Proposition & Unique Selling Points of Ebeam for DOD Inkjet
- Emerging Ebeam Application Areas

12:00 Noon Networking Luncheon

1:00 p.m. Session 4

### Emerging Markets & Opportunities

#### Insight into New Digital Press Developments from Recent Patents

Mike Willis, Managing Director, Pivotal Resources Ltd, Cambridge, UK

- The View Inside Inkjet Industry's Research Laboratories through the "Patent Window"
- Update on Landa & Other Transfer Technologies
- Challenges for High Speed Printing
  - Misting
  - Condensation
  - Missing Nozzle Detection and Correction
- Ink Jet Developments for New Digital Press Applications: Flooring, Footwear, Cosmetics & More

#### Media Handling in an On-Demand Print World

Dr. John J. Kuta, Director of Sales and Marketing North America, BDT Media Automation GmbH, Oakville, Ontario, Canada

- Transition Pre & Post-Press Media Handling Challenged by
  - Shorter Production Runs
  - Larger Media Sizes
  - Wider Array of Media Types
  - Higher Levels of Productivity
- Existing Technologies for Cut Sheet Media Management
- Latest Developments in Media Management

Additional Presentation TBA

4:00 p.m. Adjournment



Ink jet printing is the fastest growing imaging technology for office and graphics applications and particularly for digital fabrication, 3D modeling, printable electronics and many other industrial applications. These many new applications are opening up extensive opportunities for materials suppliers, media developers, consumables manufacturers, systems suppliers and others. But entering the ink jet market or just branching out into new parts of it can present a considerable technical challenge with many barriers to commercial success. Understanding the fundamentals is a prerequisite to any development. **The Ink Jet Academy** offers a course covering the basic theory of all the diverse types of ink jet technology in use today. Learn how the printheads work, what materials are used in their fabrication and the theory of operation. Learn about inks and media, how they are formulated and the supply and support systems.

Led by Dr. Alan Hudd, Alchemie Technology and Mike Willis, Pivotal Resources, **The Ink Jet Academy** provides a program and convenient format to get an expert start in the ink jet field, to get an update or to open up new ink jet fields.

## Wednesday, May 4, 2016

8:00 a.m. Registration

8:30 a.m. Opening Session

### Welcome & Introductions

Alvin G. Keene, President, IMI, Inc.,  
Carrabassett Valley, Maine

### Introduction to Ink Jet

- Course Overview
- Types of Ink Jet Technology
- Drop on Demand Technologies
- Thermal & Piezo Ink Jet
- Evolution of Ink Jet Markets
- Ink Jet Patents

### Ink Jet Ink Technologies

- Ink Types: Aqueous, Solvent, Oil, Phase Change & UV Cure
- Dyes and Pigments
- Ink Jet Ink Formulations
- Ink Jet Ink Design
- Understanding Ink Jet Printing Process
- Drop Formation
- Properties Influencing Piezo Ink Jet Ink Performance
- Testing an Ink for Reliability: Methods & Characterization

### DOD (Drop-on-Demand) Technologies

- Thermal Ink Jet
- Piezo Ink Jet
  - Piston Mode Designs
  - Roof Mode Actuators
  - Stacked Piezo Technology
  - Shear Mode Designs
  - Silicon Printheads

12:30 p.m. Lunch

1:30 p.m. Session 3

### Ink Jet Materials and Dispersions

- Range of Materials & Ink Chemistries
- Evolution of Ink Jet Inks
- Evolution of Dyes
- Pigments & Dispersion Technology
- Dispersion Theory
- Polymers and Additives
- Processes and Manufacturing

### Printhead Design Operational Issues

- Drop Placement Accuracy
- Drop Ejection Frequency
- Crosstalk
- Reliability
- Life Issues

### UV Chemistry and Curing

- UV Curable Materials
- Monomers
- Oligimers
- Photoinitiators
- UV Curing
- Print Quality Issues with UV Inks

### Print & Image Quality - Issues & Solutions

- Factors Affecting Print Quality
- Printhead - Ink - Substrate
- Greyscale Methods

6:30 p.m. Networking Reception

## Thursday, May 5, 2016

8:30 a.m. Session 3

### System Design Issues

- Industrial Ink Supplies
- Bubble Control
- Nozzle Maintenance

### Emerging Technologies

- Kodak Stream
- Memjet
- HP PageWide Technology
- Landa Nanography
- Lead-free Piezo
- Speed and Resolution Trends

### Ink Jet Applications

- Coding, Marking, Mailing & Addressing
- Wide Format Graphics
- Industrial Decoration
  - Decors & Laminates
- Ceramic Tiles
- Textiles
- Commercial Printing
- Labels & Packaging
- Printed Electronics
- Bio-medical
- 3D Printing
- & More!

12:00 Noon Adjournment



Mike Willis  
Pivotal  
Resources

Dr. Alan Hudd  
Alchemie  
Technology



## Ink Jet Academy Leaders

**Dr. Alan L Hudd, Director and Founder, Alchemie Technology, Cambridge, UK**

Dr. Hudd is Director and Founder of Alchemie Technology Ltd. Alchemie is an independent contract development and consultancy to the industrial ink jet industry. Particular research interests are the development ink jet's role in providing sustainable energy solutions and 3D printing solutions. Alchemie's Jetronica printhead technology for coatings, adhesives, textiles & additive manufacturing applications provides "materials patterning" at production line speeds.

Dr. Hudd was a founder of Xenia Technology and Managing Director from 1996 to 2012. During this period, he built Xenia to become a world leading ink jet developer and solutions provider to industrial ink jet markets.

In 1987, Dr. Hudd joined Domino Printing Sciences and spent 8 years as Fluids Technology Manager, developing a wide range of inkjet inks for diverse applications and is credited with a number of patents and significant innovations within the industrial inkjet industry. Prior to Domino, he spent almost eight years with the Ministry of Defence and Royal Ordnance in the UK, developing new solid polymer rocket propellants for air to air missiles.

Dr. Hudd graduated with B.Sc. Honours degree in Chemistry and Physics, M.Sc and Ph.D research degrees in Polymer Chemistry from Manchester University.

**Mike Willis, Managing Director, Pivotal Resources Limited, Cambridge, UK**

Mr. Willis is the Founder and Managing Director of Pivotal Resources, an international marketing and technical consultancy specializing in digital printing. In addition, he is Publisher of Directions, a service that monitors ink jet patents and significant product launches.

He has worked in this industry for the past 30 years, accumulating considerable experience in a wide range of imaging technologies. Recognized as an industry expert, he regularly speaks and gives tutorials at printing conferences in Europe and North America.

Mike was a founder member of Xaar, a company set up to exploit high resolution piezo ink jet technology. Later, while responsible for business development, he promoted the technology, forging links with printer companies worldwide.

Mike began his career at Gestetner, working on a variety of photocopier projects and was responsible for development of image processes. Mr. Willis graduated from the Polytechnic of Central London in 1976 with Honours in Photographic Sciences.

## Registration Information



Registration Fees: \$1095 per registrant per program  
\$995 per program for each additional registrant from same company when registered as a group.

The registration fee includes attendance at all sessions, all scheduled program functions and the program reference materials. Cancellations will receive a 100% refund if made 96 hours prior to the start of the program. Substitutions may be made at any time. Cancellations made less than 96 hours prior to the start of the program will not receive a refund, but will receive the conference reference materials.

**To register**, submit the registration form with payment to Susan Vandrey, Conference Administrator, Information Management Institute, Inc., 1106 Valley Crossing, Carrabassett Valley, ME 04947 USA. You may reserve space by calling +1-207-235-2225, sending a fax to +1-207-235-2226 or by sending an email message to [imi@imiconf.com](mailto:imi@imiconf.com) or visiting our web site [www.imiconf.com](http://www.imiconf.com)

### REGISTRATION FORM

☐

**Digital Printing Presses 2016 Conference**

**May 2-3, 2016**

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**Ink Jet Academy**

**May 4-5, 2016**

I wish to reserve a ☐ **Display Space** ☐ **Suppliers' Forum Slot**

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JOB TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

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COUNTRY \_\_\_\_\_

PHONE \_\_\_\_\_ FAX: \_\_\_\_\_

EMAIL \_\_\_\_\_

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I Want to Pay by Credit Card

☐

Please Invoice Me

### The Florida Hotel & Conference Center

IMI's **Digital Printing Presses 2016 Conference** and **Ink Jet Academy** are being held at The Florida Hotel & Conference Center conveniently located 7 miles from Orlando International Airport and adjacent to The Florida Mall. The group rate of \$149 per night (including \$18 resort fee) is available until April 22, 2016. Reservations can be made online at <http://tinyurl.com/IMIMay2016conf> or by calling +1-407-859-1500 or +1-800-588-4656.

Orlando is served by Orlando International Airport (MCO) with convenient & economical service from destinations around the U.S. and the world. Taxi/shuttle/limousine services are available in the baggage claim area. Group shuttle prices to the hotel are approximately \$20 one-way and \$32 round trip per person. Taxicabs are approximately \$30 to \$40 each way.

The Florida Hotel & Conference Center address is:  
1500 Sand Lake Road  
Orlando, FL 32809  
GPS address: 8001 S. Orange Blossom Trail  
Orlando, FL 32809  
Phone: +1-407-859-1500  
Fax: +1-407-855-9863

### Don't Miss Upcoming IMI & IMI Europe Programs - Visit [www.imiconf.com](http://www.imiconf.com)

#### IMI Europe Inkjet Summer School

June 20-24, 2016

Ink Jet Academy

#### Fluid Dynamics & Acoustics for Inkjet Printing

June 20-21, 2016

Digital Textile Printing

Inkjet Ink Characterisation

June 22-23, 2016

Inkjet Ink Manufacturing

Jetting Functional Fluids

June 23-24, 2016

Print Media Academy

Heidelberg, Germany

#### IMI Europe Digital Print Europe

November 28-December 1, 2016

Ink Jet Academy

Additional Course TBA

November 28-29, 2016

#### IMI Europe Inkjet Printing Conference

November 29-December 1, 2016

Novotel Amsterdam City

Amsterdam, The Netherlands

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May 2-3, 2016

#### Security Printing 2016 Conference

Ink Jet Academy

May 4-5, 2016

The Florida Hotel & Conference Center

Orlando, Florida, USA

#### Thermal Printing 2016 Conference

May 9-11, 2016

#### 3D Printing, Additive Manufacturing & Digital Fabrication Course

May 10-11, 2016

#### Digital Manufacturing 2016 Conference

#### Opportunities for Manufacturing Rebirth

May 11-13, 2016

Saguaro Scottsdale Hotel

Scottsdale (Phoenix), Arizona, USA

#### Ink Jet Technology Showcase 2016

September 7-9, 2016

Chicago, Illinois, TBA

#### Ink Jet Printing World 2017

#### Ink Jet Printing 2017 Conference

Ink Jet Academy

1st Quarter 2017

USA Location TBA