

CALL FOR PAPERS

*more than printing*  
**Digital Fabrication  
and Digital Printing**  
**NIP30**

September 7 - 11, 2014  
Philadelphia, Pennsylvania



Photo: K. Rankin for Visit Philadelphia™

General Chair: Branka Lozo, University of Zagreb

[www.imaging.org/philadelphia](http://www.imaging.org/philadelphia)

Abstract Deadline:  
February 9, 2014



Sponsored by the  
Society for Imaging Science and Technology (IS&T) and the  
Imaging Society of Japan (ISJ)

## The Venue

### Philadelphia, Pennsylvania

The NIP30/Digital Fabrication conference takes place at the Sheraton Philadelphia Downtown.

Founded by William Penn in 1682, Philadelphia was a meeting place for the Founding Fathers of the United States. It was the site of the signing of the Declaration of Independence (1776) and of the US Constitution (1787), and is home to the US Liberty Bell. Because of its location at the confluence of the Delaware and Schuylkill rivers, the city evolved during the 19th century as a major industrial and transportation center, attracting numerous immigrants from Europe. This, along with it being a major destination for African Americans during the Great Migration, has shaped the exciting ethnic diversity it boasts today.

Beyond its roots in American history, the “City of Brotherly Love” is home to a number of highly-respected museums, the largest landscaped urban park in the world, many institutes of higher learning, and a number of Fortune 500 companies. It is the fifth largest city in the US and is famous for its Philly cheese steak sandwiches, LOVE sculpture, iconic role in the movie Rocky, and the fact that it has more outdoor sculptures and murals than any other American city.

For more information, visit [www.visitphilly.com/](http://www.visitphilly.com/) and [en.wikipedia.org/wiki/Philadelphia](http://en.wikipedia.org/wiki/Philadelphia).

Philadelphia International Airport (PHL) is a 20-minute drive from the hotel and has direct flights to/from 38 international destinations. For more information, visit [www.phl.org](http://www.phl.org).

## Conference Committee

### General Chair

Branka Lozo, University of Zagreb

### Publications Chair

Masahiko Fujii, Fuji Xerox Co., Ltd.

### Program Chairs

#### Asia & Oceania

Kye-Si Kwon, Soonchunhyang University

Teruaki Mitsuya, Ricoh Company, Ltd.

Koei Suzuki, Ricoh Company, Ltd.

#### The Americas

Jim Mrvos, Lexmark International, Inc.

Marie Vans, Hewlett-Packard Labs

#### Europe/Middle East

Ingo Reinhold, Xaar Jet AB

Wolfgang Schmidt, Schoeller Technocell GmbH & Co. KG

#### Guest Program Chair: 3D Printing

Chris Tuck, University of Nottingham

### Short Course Chair

Ligia Bejat, Lexmark International, Inc.

### Interactive, Print Gallery, and Demonstration Session Chair

Emma Talbot, University of Durham

### Publicity Chairs

Shuichi Maeda, Tokai University

Jolke Perelaer, Wiley-VCH Verlag GmbH Co. KGaA

### University Liaison Chair

Trevor Snyder, Xerox Corporation

### Audio-Visual Chair

Steven V. Korol, Evolutionary Technology

### Advisory Chair

Reinhard Baumann, Fraunhofer Einrichtung for Electronic Nano Systems, ENAS, and Chemintz University of Technology

Keep up-to-date on the details of these meetings! Join the  
NIP (Digital Printing)/Digital Fabrication Conference Group on LinkedIn!

## SUBMISSIONS IN THE FOLLOWING AREAS ARE ENCOURAGED:

### Digital Printing and Fabrication Principles and Processes

- Hybrid Technologies
- Laser Imaging and Patterning
- Aerosol-based Processes
- Digital Finishing and Converting
- Metrology Tools for Digital Printing Processes
- Performance of Digital Print Products (Quality, Robustness, Permanence, Functionality)
- Pagewide Printing
- Toner-based Processes
- Inkjet-based Processes
- Thermal Printing

### Physics and Chemistry of Materials

- Colloids and Colloidal Suspensions (Toner, Particles, Ink Formulation, Functionality)
- Substrates for Digital Processes (Paper, Plastics, Textiles, Ceramics, Glass)
- Ink-Substrate Interactions
- Process Materials – Machine Interactions
- Metrology for Digital Production Materials
- Environmental Sustainability

### Lab2Fab

- Design/Build of Digital Production Machines
- Standardization

### Digital Workflows

- Printing Services and Solutions
- RIP and Pre-Press Solutions; CAM for Digital Production
- Digital Printing Fulfillment; Digital Finishing
- Printing Systems Optimization
- Document Workflows; Custom Printing and Print Ordering

### Applications

- 3D Printing/Additive Manufacturing
- Industrial Digital Printing
- Bio-Printing
- Digital Fabrication of Functional Products (Solar Cells, Displays, Sensors, Lighting)
- Electronic Paper and Paper-like Displays
- Smart Packaging & Internet of Things
- Security Printing

## ***NIP is more than printing!***

*Our industry is evolving. For those of us who have been engaged in it for years, the work we do now is more than what has traditionally been defined as printing. For those entering this business, abilities to re-define the industry abound. NIP is no longer just about traditional methods of printing—defined as laying colorants on substrates—but it is still about using printing to make things. It is about the ways that printing processes are becoming integrated into larger manufacturing processes. It's about the ways that fundamental printing technologies are being used to produce complex objects. It's about the ways that printing workflows are expanding to allow for greater creative flexibility and efficiency, whether we're producing one item or one million. And it's about the ways that needs for new printing "inks" and substrates are challenging us to develop new components to meet industry needs.*

*The goal of this conference is to bring together everyone working in the printing ecosystem—teachers, researchers, developers, practitioners, manufactures, distributors—to share ideas, learn from each other, and discover ways to collaborate to ensure the continued growth and success of this important manufacturing sector—as well as this vital conference.*

*There has been talk of changing the name to better reflect the focus of the meeting. Important feedback from attendees is contributing to that decision-making. It will continue to represent and highlight ink jet and electrophotography as it moves to include the newer areas of functional, bio-, and 3D printing. Our goals and breadth are reflected in the topic list above. We welcome submissions in all these areas, for papers, as well as short course proposals.*

## How to Submit

**Submission Deadline: February 9, 2014**

[www.imaging.org/philadelphia](http://www.imaging.org/philadelphia)

***Please read the submission criteria carefully as it changed from last year.***

To submit a technical paper representing original work in the science and/or technology related to digital printing or fabrication, you will be asked to indicate your preference for giving an oral or an interactive paper. **For both, you must submit the following** to the web address noted above. Submissions should be based on the template found there and include:

- An extended abstract of approximately 500 words, clearly stating the technical content of the paper, the methods, and conclusions; if appropriate, emphasize what is new compared to previously presented/published results. An introduction, main body, 1 figure corresponding caption clearly relevant to the topic, keywords, and a minimum of 5 (maximum of 10) references.
- Complete contact information for all author(s)—full name(s), company, address, phone/fax numbers, and email
- Up to 75-word biographical sketch of the principal author

Abstracts will be peer-reviewed and the authors will be notified by the end of February 2014.

Accepted papers (4-6 pages in length) will be published in the conference proceedings. Papers are due in electronic form by **June 17, 2014**. Please direct all submission inquiries to Diana Gonzalez at 703/642-9090, [NIP\\_DF@imaging.org](mailto:NIP_DF@imaging.org).

*The committee will be working hard to engage the local wider Philadelphia community to leverage the conference location and attendee opportunities. If you have ideas for industry or academic lab tours, please contact us. Additionally, if you would like to serve as a paper reviewer, session chair, or in some other capacity, we'd love to hear from you. Feel free to contact the committee via [NIP\\_DF@imaging.org](mailto:NIP_DF@imaging.org).*

***NIP will always be about printing . . . but it is also about much more!***

*We look forward to seeing you next year in Philadelphia!*

### Networking Session and Late Breaking News Panel

The **2014 Networking Session** will appeal to those interested in collaboration/cooperation between companies working to solve problems of universal interest to the digital printing community. The discussion in Philadelphia may lead to agreement on ways to collaborate on a single challenge and define how solutions may come about.

We are using LinkedIn to organize the 2014 Networking Session. To contribute to the discussion, join the NIP (Digital Printing)/Digital Fabrication group on LinkedIn. Once a member of that group, you can join the subgroup: Collaboration for Digital Printing Partners.

**Late Breaking News** compiles recent success stories on the implementation of digital printing applications into manufacturing lines. Every new successful implementation strengthens the standing of our community and the general perception of digital fabrication. We encourage you to present your success story. Please, contact [NIP\\_DF@imaging.org](mailto:NIP_DF@imaging.org) to do so.

## Keynote Talks

Keynote addresses by leaders in the industry and related scientific fields are a highlight of the conference. These talks provide attendees with broader context on industry-wide issues, important technical achievements, and/or international market trends. The 2014 keynotes will focus on how the relevance of printing and imaging continues to expand beyond traditional printing to hybrid and new systems—not only in the areas of functional applications such as printed electronics, bio-printing, and 3D printing, but also in the development of new techniques for traditional processes, like electrophotography.

## Special Topic: 3D Printing

Following on the highly successful Digital Biology Special Session this past year, the 2014 conference will feature a special session on 3D printing. The day-long session, chaired by Chris Tuck (EPSRC Centre for Additive Manufacturing at University of Nottingham), will highlight the latest technical achievements in the field of additive manufacturing. Talks will provide detailed insight into specific aspects of the entire additive manufacturing process, including machinery concepts, 3D capture, 3D creative programs, and the use and development of existing and new building materials, such as ceramics, glass, and metals. Feel free to contribute your research results by submitting papers on this topic!

## Technology Roundtables

Special Technology and Application Roundtables are already being planned for next year. Topics discussed in 2013 were the future of digital fabrication, digital packaging, additive manufacturing, and university/industry collaboration. What topic would you like to discuss with leading experts from industry and academia?

Send ideas to [NIP\\_DF@imaging.org](mailto:NIP_DF@imaging.org)

## Invitation to Exhibitors

Join us in Philadelphia! Let digital printing and fabrication industry leaders and technical experts see your products and services.

A highlight of the conference, the exhibit features industry-leading companies and their state-of-the-art printing products and applications, including materials, inks/toners, papers, films, textiles, and test equipment.

For information, please contact Donna Smith ([dsmith@imaging.org](mailto:dsmith@imaging.org)). The exhibit runs September 9–10. Early exhibitor registration rates are in effect until June 15, 2014.

## Short Courses

The conference offers an extensive array of short courses taught by world-renowned experts on a wide range of subjects related to digital printing technologies. Courses this year will mostly be 2-hours in length and held on Sunday, September 7th.

Past classes have included Introduction to Digital Fabrication, Printed Electronics, Printing Biomaterials, Digital Fabrication Machinery, Industrial Ink Jet Technology for Printing and Fabrication, and Desktop Ink Jet Products Performance.

In addition to the traditional types of course offered in past years, **we are looking for instructors/experts to offer location-based and application/industry-focused classes or workshops.** We are also looking for classes with a hands-on, practical nature, and/or untraditional format.

Short courses will be published in the Preliminary Program. Those interested in offering a workshop or course should send a proposal to [NIP\\_DF@imaging.org](mailto:NIP_DF@imaging.org) by January 10, 2014.

**Digital Fabrication and Printing/NIP30**

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