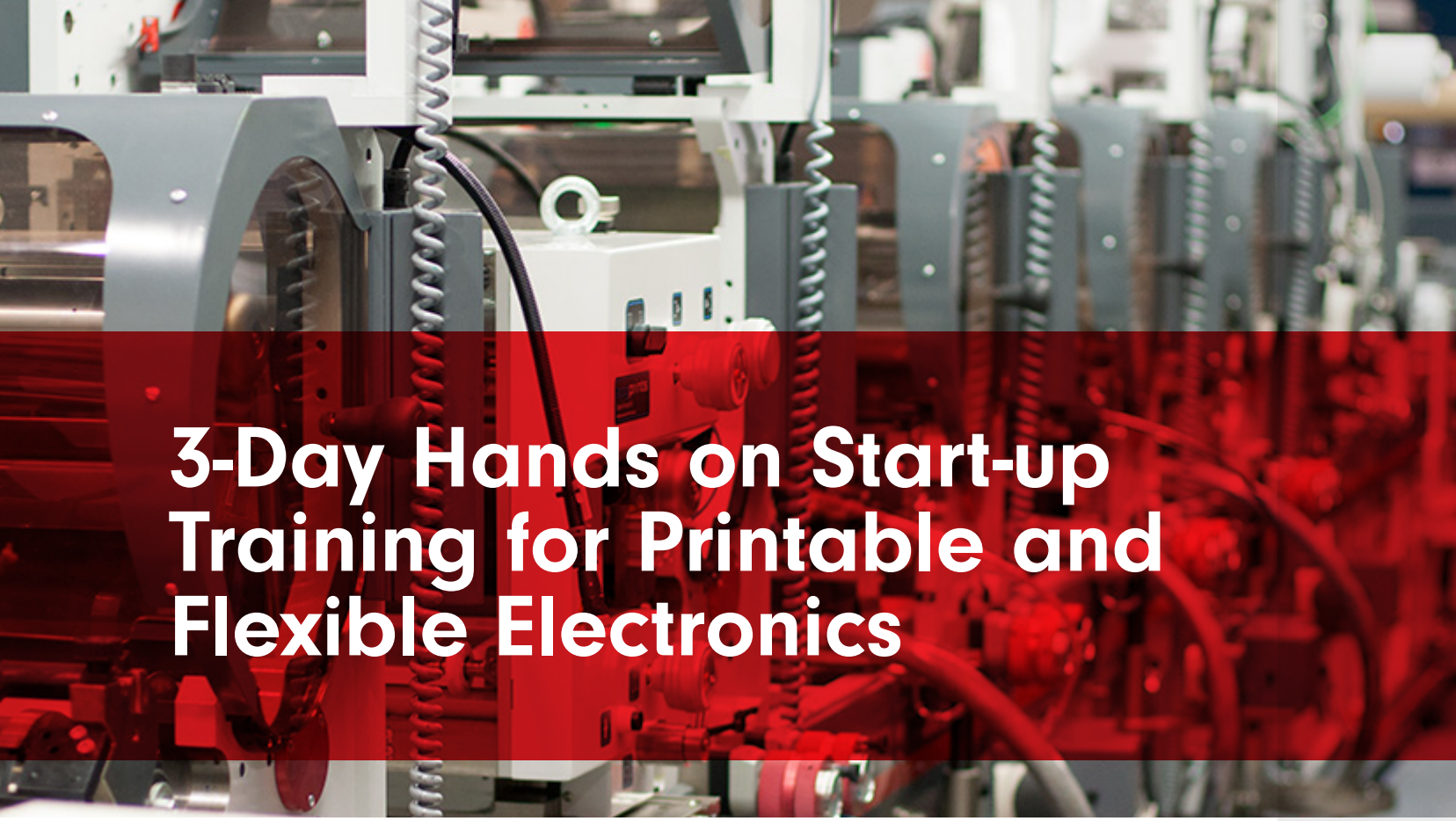


3-Day Hands on Start-up Training for Printable and Flexible Electronics

In collaboration with:

intelliFLEX Innovation Alliance

Printability and Graphic Communications Institute (ICI)

National Research Council of Canada (NRC)

PRINTABILITY
AND GRAPHIC COMMUNICATIONS
INSTITUTE

NRC·CNRC

intelliFLEX

intelliFLEX.org 613.505.4775
Ottawa, Canada

3-DAY TRAINING SESSION

Are you new to printable and flexible electronics? Do you want to learn about the fundamentals? Do you want to start new product development? Do you need to provide manufacturing services?

As part of its Technical Program, intelliFLEX is offering a three-day Training Course in partnership with the Printability and Graphic Communications Institute (ICI) and the National Research Council of Canada (NRC).

intelliFLEX provides our Members with exclusive access to the resources and expertise critical to developing and bringing to market new products and applications enabled with printable, flexible or wearable electronics (FHE).

Through this Training Course, participants will receive high-value, hands-on learning about the design, processes and materials for new product development. This training is a must-have starting point for those who want to get started with PE and learn the fundamentals.

The Training Program is open to anyone. intelliFLEX Members, as well as Members of Impression 2020, will receive a 10 per cent discount.

Consider our Training Program if you fit the following criteria:

- Want to learn how to design value-added features and new applications using printable or flexible electronics
- Need to know what is available/feasible in sub-components, substrates, inks, manufacturing processes and resources to create new products, features and applications
- Work in a related field and need to fast track to have the knowledge to develop in printable and flexible electronics
- Don't currently use printable and flexible electronics in your products or manufacturing processes, but would like to do so

See if you fit our target audience:

- Individuals with product companies, contract manufacturers, R&D organizations or technology development companies interested in new applications on a systems level (applications engineering) versus developing sub-components (R&D)
- Engineers and scientists in various vertical industry segments such as packaging, building automation, consumer products, automotive, and aerospace and defence
- Designers and new product developers involved in creating new value-added features or new products

MONTREAL, QUEBEC

The Theory:

- Introduction to printable electronics
- Existing capabilities and methods: options, advantages, disadvantages, limitations
- Typical system components, existing sub-components (e.g. batteries, sensors, displays, logic circuits, antennas, software) and applications
- Engineering design considerations
- Manufacturing considerations and conclusions

"This was a wide-ranging and intensive course with a very good balance of pratical applications and lectures. The fast pace of changes in this field make it valuable for people working in R&D to have this type of overview of the state of this art."

~Walt Sacuta
CuePath Innovation

"I really enjoy learning from the masters. I value the insights that I can set from the working experience from them."

~José Lara
Centennial College

The Practice:

1. **Ink formulation and proofing**
   You will formulate a printable conductive carbon ink for flexography from carbon slurry:
   - Complement formulation
   - Dilution for viscosity adjustment and characterization
   - Proofing to estimate the resistance of the ink as a function of the formulation parameters

   Formulating inks will provide participants with practical and theoretical knowledge on the characteristics of ink components and how this influences final printability.

2. **Design consideration and prepress**
   You will produce the files required to create image plates for flexography, screen-printing and gravure. Participants will learn the file requirements and specifics that apply, depending on the printing process and desired application.

3. **Multilayer printing**
   You will participate in the printing of an electroluminescent sample on different substrates (e.g. paper, cardboard, films). This will be done using a flatbed screen printer, to compare what affect the choice of substrate has on a specific application, and to experiment with the challenge of manufacturing a structure with multiple functional layers.

4. **Hybrid press**
   You will print inks for gravure and screen printing on film and paper, using one or many printing technologies.

"This training was developed in response to the broader industry's interest in adding printable electronics to their product development toolkits for a number of vertical markets, such as packaging, intelligent homes and health care," said Peter Kallai, President and CEO of intelliFLEX. "Smart features created with printable and flexible electronics can power the Internet of Everything. Products can be enabled, at a low cost and in high volume, to interact through the Internet with consumers, brand owners and other members of the supply chain."

~Peter Kallai

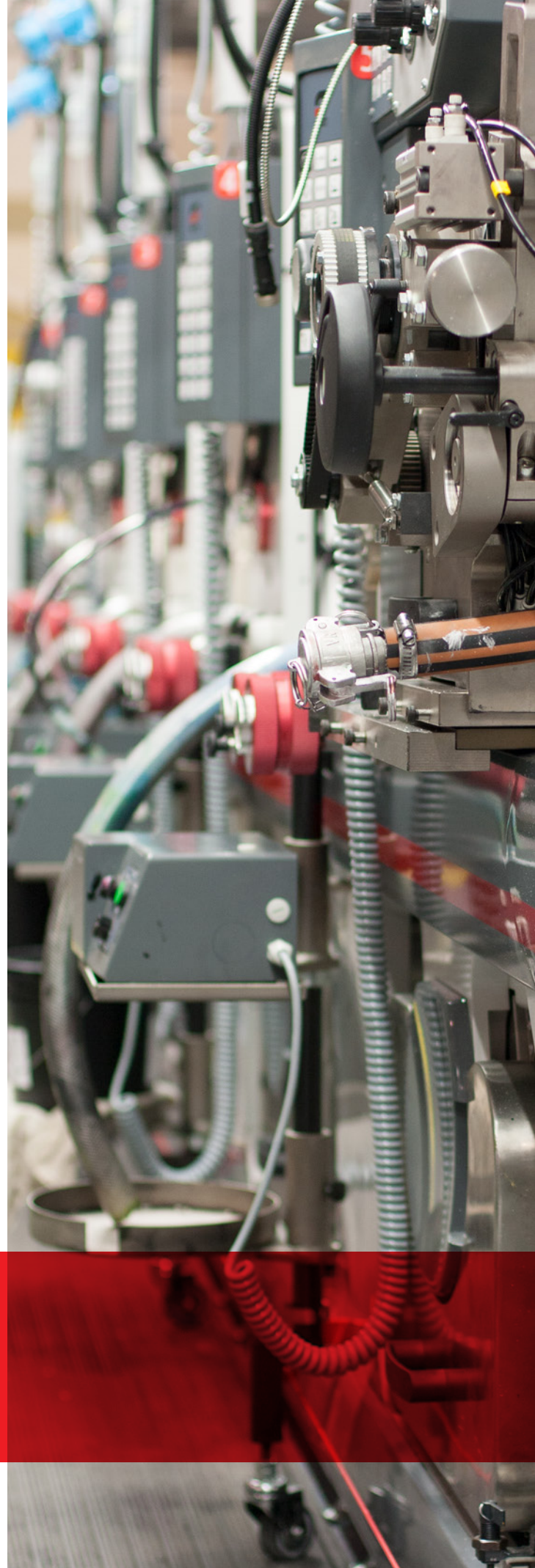
President and CEO
intelliFLEX Innovation Alliance

Registration

- Courses are three days long.
- Courses take place at ICI: 999 Emile-journault Avenue East, Montreal, Quebec H2M 2E2
- Registration Fees:

Non-Members:	CDN$2,150
intelliFLEX Members:	CDN$1,950
Academics:	CDN$1,450

- Courses are available in English.
- Standard enrolment is two teams of five participants for each course.
- Custom corporate training and corporate training packages are available on other dates.



Register Now

intelliflex.org/training or contact ICI at information@i-ci.ca or call 1-514-389-5061