



The intelliFLEX Innovation Alliance held the Virtual CPES2021, March 17-19, 2021. The Canadian Printed and flexible Electronics Symposium 2021 was a big success!

This 6th international Symposium of Canada's premier conference and trade show exhibition for flexible and hybrid electronics (FHE) took place virtually this week. More than 180 colleagues from over 80 organizations in 15 countries around the World connected, contributed and learned.

"We are gratified by the level of interest and support we have received for this exciting event. CPES2021 holds appeal for both newcomers and veterans of the industry, relevant for the academic and the industrial members of our community, as well as for those looking to learn more about this exciting field. This past year has been challenging on many fronts, and we had great pleasure reconnecting with our established colleagues and making new contacts." says Howard W. Campbell, Chair of the intelliFLEX Board of Directors.

"The organizing Committee has worked hard to prepare this virtual Symposium, and it had several key supporters. These include NovaCentrix, our Diamond Sponsor, NSERC's GreEN Electronics Network, ICI and Neuronic Works as Gold Sponsors, C2Mi, Circuit-Source, Copprint, Henkel, INO and Sun Chemical as Copper Sponsors.

We wish to also acknowledge the contributions of our Partners NRC-CNRC -whose ongoing support of intelliFLEX's efforts in technology exchanges between our students, researchers, industrials, and suppliers is essential, and Global Affairs Canada, without whom this event would not have happened.

New companies showcased their expertise and their innovations. The CPES Committee is very pleased to identify new companies in all PE fields and gain new fans of the Event" says Dr. Michelle Chrétien, intelliFLEX President and CEO and Associate Vice President, Research at Conestoga College.

"Our annual event is recognized for its great networking opportunities and the dynamism of the industrial, academic and institutional community. In this special year, we were focussed on strengthening international networks, thanks to a platform dedicated to facilitating virtual interaction we can say: mission accomplished! Speakers from around the world talked us through advances in smart textiles, supply chain management, sustainability challenges, while also highlighting the latest developments in materials and processes for printed and flexible electronics." says Dr. Chloé Bois, ICI General manager and NSERC Industrial Research Chair for Colleges in Functional Printed Applications Manufacturing, chair of the CPES2021 Selection Committee.

Moreover, the ***Your research project presentation: 90 seconds, 2 slides! Students' Contest*** was a great success with 24 students from the GreEN Electronics Network.

“Without exception the talks were of a high standard, which is no easy task given the time limit and virtual format! I thoroughly enjoyed all of the presentations and look forward to seeing further research talks by all of you in the future. It was not an easy task for the jury to decide the prizewinners, and it was very close.

I think that all your talks were a highlight of the event.” commented Dr. Neil Graddage, Research Officer, Organic Materials and Devices, Advanced Electronics and Photonics Research Centre, National Research Council Canada, who chaired this contest.

The winners of the two 500\$ grants, sponsored by NovaCentrix are Kaitlin Wagner, University of Ottawa and Catherine Beaumont, Université Laval.

intelliFLEX Awards

In keeping with the themes and focus of CPES, award recipients highlighted how collaboration across the industry ecosystem between various industry and R&D players helped to address real needs in various market verticals.

This year, there were three Award categories, recognizing contributions towards:

- Research Innovation
- Most Innovative New Product/Commercialization
- Women in FHE STEM

The intelliFLEX Research Innovation Award

recognizes a research project completed in the past year into underlying technical principles, the proof of concept, that can enable the development of new and innovative products and applications for printable, flexible or wearable electronics. The proof of concept has been validated and tested and is ready for commercialization. Canadian universities, not-for-profit R&D organizations and colleges are eligible.

Two Awards were granted, to the National Research Council of Canada (NRC) and to ICI.

Arnold Kell and Paul Trudeau, Research Officers from the NRC, were recognized for their work in the field of printed electronics and over-molded smart parts. The team's innovative Molecular Inks (M-inks), co-developed with e2ip technologies, and processing approach for over molding has created a technology relevant for development of novel 3D Human-Machine Interfaces (HMIs). Remarkably, the traces produced from M-ink can be elongated more than 100% during thermoforming without loss of function. This technology is opening up new design possibilities for the team and enabling the re-imagination of 3D HMIs that are larger and more complex than anything currently manufactured.

Ngoc-Duc Trinh, Project and Educational Transfer Manager, ICI, won for innovation in the printing of smart labels to be used across a variety of applications, with a focus on cold-chain monitoring. Innovation included continuous roll to roll printing of antenna, circuits, batteries combined with

the integration of components. Medical, pharmaceutical and food chains have been looking for these solutions for some time, with an immense, growing market for these smart labels.

The intelliFLEX Most Innovative New Product/Commercialization Award

The new product innovation/commercialization award applies to a device, product, material or application that involves or enables printable, flexible or wearable electronics. This award is open to any Canadian for-profit organization of any size. The product must have become available in the past 12 months.

This Award went to InteraXon, whose Muse S' sleep-tracking features their unique, award-winning EEG technology which permits an understanding of what is happening in the brain at night. The lab-grade EEG and PPG sensors can monitor everything from your sleep stages, deep sleep intensity, sleep position, to heart rate and stillness, providing users with baseline data and personalized insights from which to set goals and measure progress. The market for products targeting sleep deprivation and meditation is expected to exceed \$110 Billion in the next 5 years. Muse S was introduced in Q1 of 2020 and uses a combination of electronics, printed electronics, wearables, a Bluetooth® connection and apps to achieve its results. We are very pleased to have had Ariel Garten, Co-Founder and Chief Evangelist Officer here to accept the Award on behalf of the organization.

The Women in FHE STEM Award

Intended to recognize industry leadership and professional/business and/or technical accomplishment by an individual from either industry or academia, the recipient will have a proven record of achievement that employs their expertise in science/technology/engineering related to flexible and hybrid electronics (FHE). To qualify for consideration, a nominee must operate, or be employed by, an organization that is a Member in good standing of intelliFLEX.

In a very tight race, four finalists were selected this year: Justine Decaens, R&D Manager, Groupe CTT Group, Chantal Paquet, Senior Research Officer at the National Research Council, Erika Rebrosova, Global Technology Manager – Electronic Materials, Sun Chemical and Marie-Josée Turgeon, General Manager, C2MI.

The winner of the Women in STEM Award this year is Justine Decaens, R&D Manager, Groupe CTT Group.

“Congratulations to the participants, presenter and Award Winners of this year’s symposium. Despite the pandemic, CPES 2021 has proven once again to be a major and successful event in the PE sector.” concludes Howard W. Campbell, Chair of the intelliFLEX Board of Directors.

Presentations are available for intelliFLEX members. Please contact operations@intelliflex.org for more details.

Become a member and save on our next events!

<https://intelliflex.org/membership-account/membership-levels/>

About intelliFLEX

intelliFLEX, a not-for-profit industry alliance, is a vital partner for accelerating the growth of the printable, flexible and hybrid electronics sector of more than 300 organizations across Canada. Our technologies add intelligence and connect ordinary objects to enable the Internet of Everything.