ApPEARS

APPEARANCE PRINTING

European Advanced Research School

Newsletter November 2022

Welcome!

As most of the PhD fellows of ApPEARS, also knows as Early Stage Researchers or just ESRs, are busy wrapping up their final work and thesis, more publications are being published. You can find three examples of recently published papers in this edition of the ApPEARS newsletter.

In addition, this Newsletter gives you a couple of stories from our latest events, the training event in Bristol, UK and the Closing Event in Gjøvik, Norway. The image to the left is from the sculpture park "Ekebergparken" we visited during the closing event.

Getting their hands “inky” in Bristol

In the Harbor city of Bristol, surrounded by 19th-century warehouses, the scene was set for the 4th training event of the project. At the University of the West of England, specifically the Centre for Print Research, they were ready to host 15 ApPEARS Early Stage Researchers (ESRs) with a week of interesting and various content.

During the training the ESRs did a lot of hands-on exercises, starting with the development of a simple model for 3D printing with the computer-aided design (CAD) tool called Rhino. They also got an insight in different printing techniques by getting their hands dirty, or at least “inky” when given the opportunity to test lithography, relief, and screen printing. ApPEARS PhD fellow Fereshteh Abedini who attended the training and had never tried any hand-made printing techniques before. – Controlling print parameters in hand-made printing techniques is very

challenging, but I found it an interesting topic to explore in more details, she says about her newly acquired skills.

Image: Fereshteh Abedini testing screen printing.

Image: Tanzima Habib watching Riccardo Tonello and Dipanjana Saha testing Lithography.

PhD fellow Tanzima Habib was also very pleased, saying it was very educational and helpful to practically learn about the different printing techniques and methodologies. – It definitely increased my understanding about how different printers work, how materials are used, and the printing processes, she says. Meeting people who are working with different printing methodologies specially focusing on reproducing good piece of art was a great experience to her as this was new knowledge and she learned a lot from them. – I would like to increase this network that deals directly with applications and production, she says.

Image: Colours of Bristol

Fereshteh Abedini felt the training was very well-organized. After three days in Bristol, the journey went on to Birmingham where the PhD fellows visited the national exhibition “Sign and Digital”, a trade show for the visual communications sector a place for inspiration and networking.

The last city to visit was Leeds, where the ApPEARS beneficiary the University of Leeds is located. - “In Leeds, we received a good demonstration of the devices they have, specially Xrite TAC7 material scanner”, Tanzima Habib says. They also got to present their projects through a poster session for other fellows at the University, practicing communication of their projects as well as discussing with peers.

Image: The ApPEARS group in Leeds

The networking possibilities these training events provide, are probably the most appreciated part according to the ESRs. Discussing with people gives you new perspectives and opens up for possible collaborations in the future.

Below you can find a link to a video showing some of the activities of the ApPEARS Training Event 4 in Bristol and Leeds.

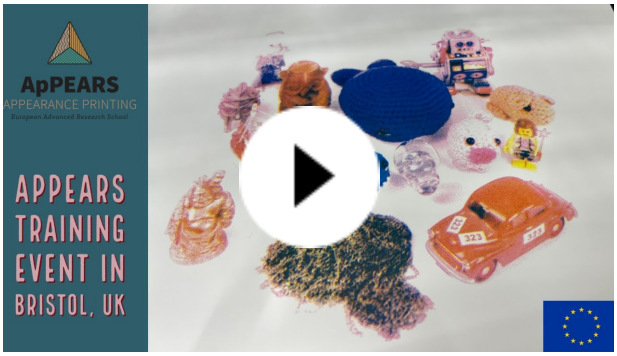
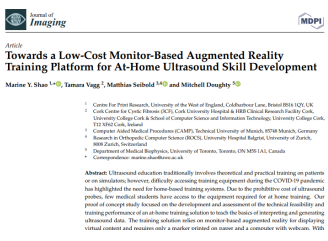


Image: Watch this YouTube video of Training event in UK by clicking the image!

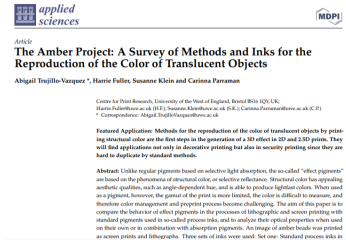
Several new journal publications

The Early Stage Researchers of ApPEARS have been publishing many papers lately. Here are three journal papers published recently:

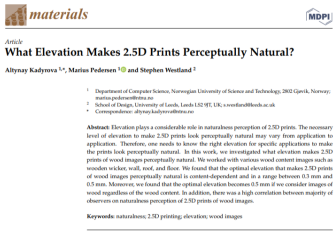

Journal of Imaging
MDPI
Article
Towards a Low-Cost Monitor-Based Augmented Reality Training Platform for At-Home Ultrasound Skill Development
Marine Y. Shao, Tamara Vogg, Matthias Seibold and Mitchell Doughty

Marine Shao

Towards a Low-Cost Monitor-


applied sciences
MDPI
Article
The Amber Project: A Survey of Methods and Inks for the Reproduction of the Color of Translucent Objects
Abigail Trujillo-Vazquez, Harrie Fuller, Susanne Klein and Carinna Parraman

Abigail Trujillo Vazquez


materials
MDPI
Article
What Elevation Makes 2.5D Prints Perceptually Natural?
Altynay Kadyrova and Marius Pedersen and Stephen Westland

Altynay Kadyrova

Based Augmented Reality Training Platform for At-Home Ultrasound Skill Development

Read paper

The Amber Project: A Survey of Methods and Inks for the Reproduction of the Color of Translucent Objects

Read paper

What Elevation Makes 2.5D Prints Perceptually Natural?

Read paper

Image: The ApPEARS Early Stage Researchers showing their ApPEARS certificates

ApPEARS Closing Event

More than three years have passed since ApPEARS started, and the first Early Stage Researcher (ESR) has already submitted the thesis. Although the project has been extended until the end of 2023, we went through with the ApPEARS Closing Event as planned in September 2022, hosted where it all started, in Gjøvik, Norway.

Image: Elevated print from Canon

The Closing Event was a dissemination event as much as it was a training event. The main goals of the Event were to disseminate the project results to potential end users as well as preparing the ESRs on what comes next by starting to think of career opportunities in the industry or academia.

For disseminating the project results, two events were planned and the first was a visit to Canon Norway. Whereas Canon in Venlo (the Netherlands) is a partner organisation of ApPEARS, Canon Norway has also been an important cooperation partner to the ApPEARS coordinator NTNU – Norwegian University of Science and Technology.

It was a natural place to visit when discussing research results. From the representative from Canon in Venlo, we learned about the value of being part of a project like

ApPEARS, where he meets young, talented researchers that bring in new perspectives to their activities.

After learning about Canon's printing technology, the ApPEARS ESRs presented their research posters to Canon employees and some of their customers who visited to learn more about the newest research in the field.

Image: Ruili He presenting her poster at Canon

The second main dissemination event was the ApPEARS Expo held at NTNU in Gjøvik, targeting the attendees of the Colour and Visual Computing Symposium (CVCS 2022). With more than 80 participants the ApPEARS Expo served as an excellent arena for interesting discussions about the projects of each of the PhD fellows present.

Life after PhD

As the ESRs are entering the final stage of their work, several topics of the Closing Event were focusing on potential future careers. Through an Industry Day, the ESRs learned about research opportunity at different companies like HP and Technicolor. For some ESRs, the thought of taking their technology to business might be intriguing, so the Innovation and Entrepreneurship Day hopefully provided both inspiration and tools for how to bring their idea into life. Vaager Innovation, a technology incubator, guided the participants through IP rules, design sprint, design thinking and financing opportunities.

Presumably, some ESRs will continue their journey in academia, and throughout two full days of research presentations, the CVCS 2022 facilitated for learning as well as networking possibilities. This year the symposium hosted more than 120 participants, over 20 papers were presented, and four invited speakers gave excellent presentations of different topics in the field of colour science.

Image: The ApPEARS group in Oslo

ApPEARS publications

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This project is funded by the Horizon 2020 programme of the European Union. Grant Agreement #814158

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