TU/e

**iNNOVATION SPACE**

Challenge name	*IN SYNC*
Challenge owners	Albert van Abbe & Timo Lejeune
	www.albertvanabbe.nl | www.lumus-instruments.com
Experts	Mathias Funk (TU/e ID) + Elke den Ouden (TU/e ILI)
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Brief summary	*IN SYNC* bridges the gap between music, light and visuals. Through the exploration of the world of music, live performance and show control, we are taking innovation to the dance floor. Should and can we reshape the art of live-performance? And how can data, computation and interaction design help us to create more synchronised audiovisual performances?
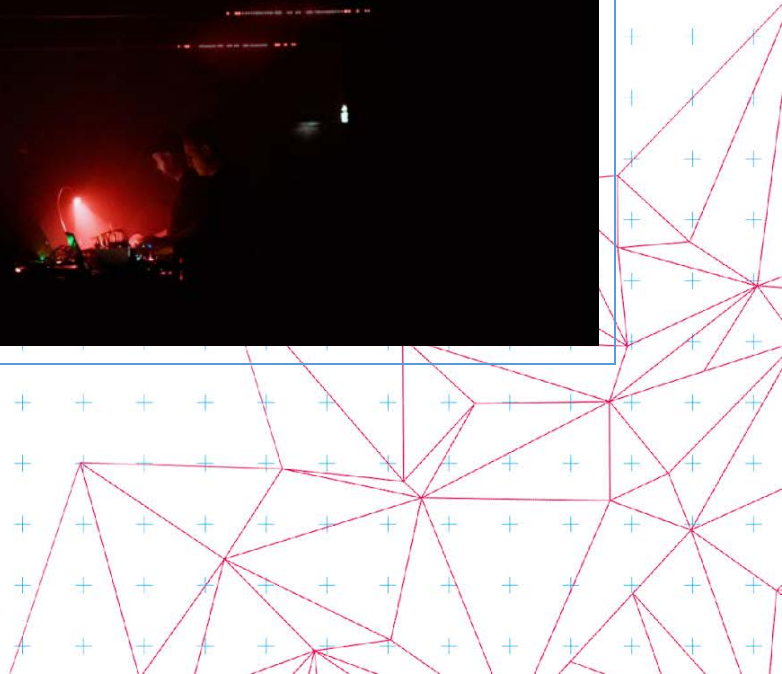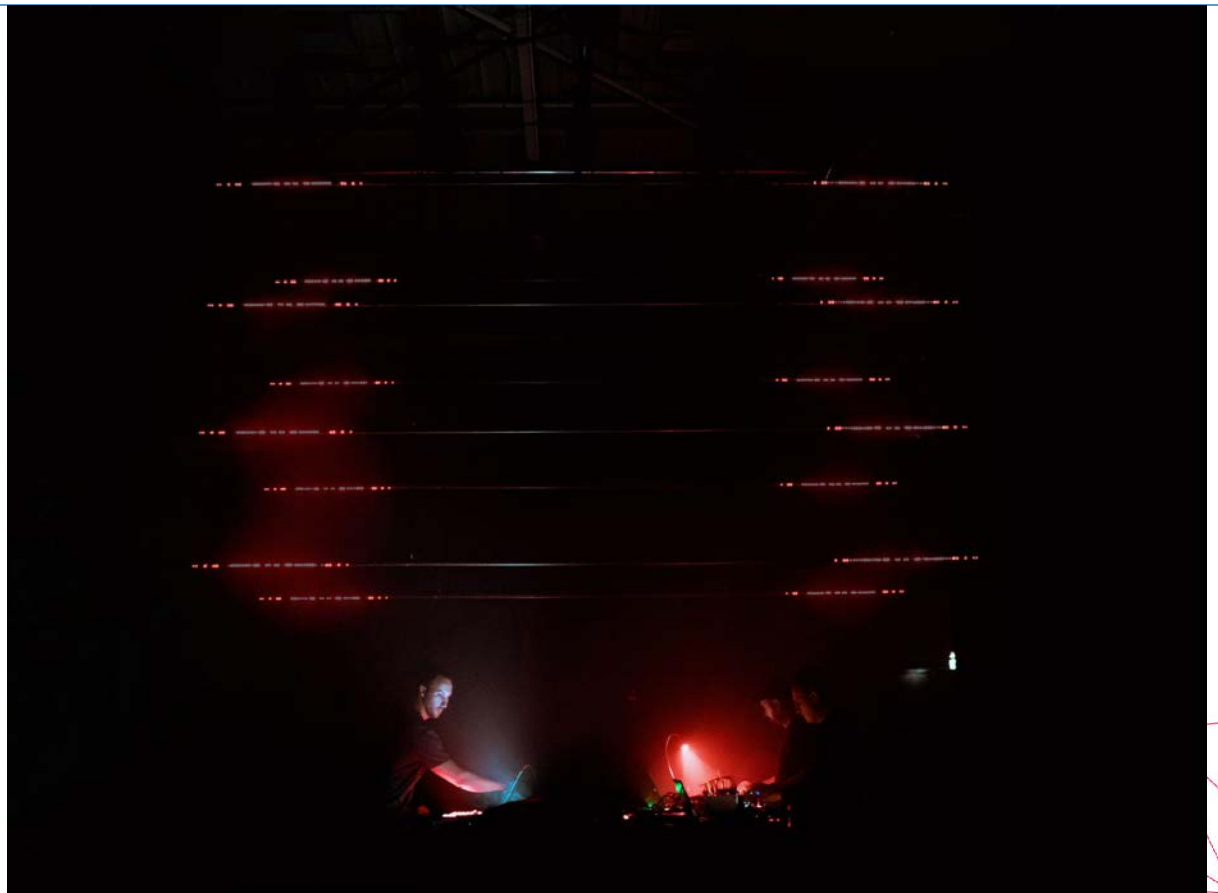
About the challenge owners

Albert van Abbe:

Sound nerd & visual artist Albert van Abbe has just about covered the whole field of electronic music over the course of the last 21 years; from minimalistic sound installations to uncompromising Hardcore Acid productions, a long list of collaborative works, institutional partnerships and public projects with artists of various mediums add to an exciting list of performances both inside and outside the club.

Lumus Instruments:

Lumus Instruments is a multidisciplinary studio that primarily uses light, sound and structure in various forms of installation art and scenography. With a team rooted in design, architecture and engineering, they continually search for seamless integration of audiovisual technology within large scale installations. The involvement of sound and the performative element are a core aspect to their work. Concepts like 'Contrarium' illustrate how the studio continues to explore real-time audiovisual concepts on a resolution rich and intricate canvas. This ongoing implementation of code, structural design, interaction design and electronics is how they steadily progress as an innovative studio, aiming to bring physicality to refined digital systems.

Challenge description

Clubs and festivals have become worlds where music inspired the creation of technological megastructures that amplify our experience. Throughout the years, light and visuals as an artform have been growing as essential elements of the performance. It has resulted in two very different worlds, music and light, that have surprisingly little interaction.

Most of us are familiar with the massive synchronised shows that you see at Armin van Buuren or Martin Garrix. Yet when you go to a 'normal' club or festival, this experience of synchronicity seems to fall short. Arguably, it has also taken its toll on the creative freedom of the musicians on stage. So should and can we reshape the art of live-performance? And how can data, computation and interaction design help us to create more synchronised audiovisual performances?

With *IN SYNC* we are exploring the world of music, live performance and all-round show control. By taking a closer look at the technologies that are being used in the field today, we are going to design hardware that bridges the gap between music and light. The overarching aim is more abstract though, as we strive for social and artistic connection between musicians and light artists on stage. Therefore, understanding the core of audio-visual live performance as an artform is a large theme of the project, along with the conversion of this understanding into forms of innovation. Prototypes and concepts that have been developed by Albert van Abbe and Lumus Instruments will provide a starting point for this journey.

Input and involvement of challenge owner

Albert and Timo will provide an interactive presentation at the start of the challenge as an introduction to electronic music culture and its industry. Students are free to reach out to both of them during the challenge to ask for feedback, or request calls or meetings if necessary. They can also bring in experts from the industry to give feedback on ideas, concepts and prototypes.

Resources

A proper laptop can do most of the job, sometimes combined with simple Arduino/Teensy or Rasp Pi based prototypes. In a later stage, some more advanced PCB based prototypes might be helpful.

Timo (Lumus Instruments) can provide a couple of MIDI-controllers to create tangible user interfaces with, next to some audio-analysis hardware and lighting control hard/software. Also, they will make available Lofi, a club in Amsterdam, as a testing ground for newly made prototypes or as a place for students to get a glimpse behind the scenes.

Albert can provide test performances where beta technology can be tried out. This can be at one of his live shows or workspaces which include the vintage Willem Twee Studio's in Den Bosch. Albert can also provide his studio hardware for the challenges, like his self-developed SYNC AI hardware sequencer.