

Jinan 2021: Engaging with Challenges in Design Education

6th International Conference for Design Education Researchers: DRS Learn X Design 2021

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10th Anniversary of the DRS Learn X Design Conference Series

The year 2021 has been particularly special for the DRS Learn X Design (LxD 2021)¹ organising teams. The conference series marked the 10th anniversary since the first event was held in Paris in 2011 (Bohemia et al., 2011)², see the reflection on page 50. Since then, the conferences have been organised biannually. The DRS/CUMULUS 2nd International Conference for Design Education Researchers was held in Oslo in 2013, on the theme of *Design Learning for Tomorrow – Design Education from Kindergarten to PhD* (Lloyd & Bohemia, 2013; Nielsen et al., 2015; Reitan et al., 2013)³, see the reflection on page 45. The DRS/CUMULUS/Design-Ed Learn X Design 3rd International Conference for Design Education Researchers was held in Chicago in 2015, on the theme of *Education and Design to Enlighten a Citizenry* (VandeZande et al., 2015)⁴, see the reflection on page 38. The DRS Learn X Design 4th International Conference for Design Education Researchers was held in London in 2017, on the theme of *The Allure of the Digital and Beyond* (Pritchard & Lambert, 2017)⁵, see the reflection 35. The DRS Learn X Design 5th International Conference for Design Education Researchers was held in Ankara in 2019, on the theme of *Insider Knowledge* (Börekçi et al., 2019)⁶, see the reflection on page 30. The theme for the 6th International Conference for Design Education Researchers hosted by the Shandong University of Art & Design was *Engaging with Challenges in Design Education* (Bohemia et al., 2021). The general 2021 conference theme reflected the unprecedented changes which took place in design education around the world since the first event was held in Paris a decade ago. For example, in China since 2016, more than 2000 of institutions have been delivering design programmes. Every year, also in China alone, more than **540 000** students enrol into Design programmes. And the number of **students studying design and related majors** in the Chinese schools now **exceeds 2 million**. The design discipline has become the most prominent one in more than 140 first-level disciplines and more than 90 undergraduate majors in China. China's growth of design programmes and design student graduates at universities is shifting the very foundation of how design is taught (Pan, 2021). In addition, the Design is being taken up increasingly by other disciplines (Bravo & Bohemia, 2021) and being incorporated into general education (Lutnæs, 2019) which requires us to reconceptualise the design education and its purposes (Bravo & Bohemia, 2020; Lloyd, 2011). This echoes advocacy by scholars such as Anita Cross (1984), Buchanan (2000), and Nielsen and Brænne (2013) for design to become part of the general education.

At the time when the general conference theme was proposed, Covid-19 which forced the most rapid and radical changes on design education, was not yet on horizon (see Figure 1). However, as the education has been rapidly transformed due to the Covid-19 pandemic that has affected the entire world, the general theme

¹ <https://dl.designresearchsociety.org/drs2021-learnxdesign/>

² <https://dl.designresearchsociety.org/drs2011-learnxdesign/>

³ <https://dl.designresearchsociety.org/drs2013-learnxdesign/>

⁴ <https://dl.designresearchsociety.org/drs2015-learnxdesign/>

⁵ <https://dl.designresearchsociety.org/drs2017-learnxdesign/>

⁶ <https://dl.designresearchsociety.org/drs2019-learnxdesign/>



of the conference indivertibly became a fitting theme.



Figure 1. SUAD proposed to host the 2021 DRS Learn X Design conference in 2019. On the right, students practicing a performance routine at one of the SUAD theatres. The plan was to introduce conference participants to different cultural activities.

Note: The conference visual identity evolved over the time

The DRS Learn X Design 2021, 6th International Conference for Design Education Researchers took place online between 24–26 September 2021. It was hosted by Shandong University of Art & Design (SUAD) in Jinan, China. During this online international conference, the participants reflected on the ongoing challenges which have affected their practices. The process of sharing different perspectives with the international design education community members facilitated collective learning. The challenges that design educators experienced were reflected in the conference tracks, such as managing design education in times of crisis; and those related to ethics and our personal, societal and educational circumstances.

Submissions

Altogether 338 authors from 39 countries contributed 168 submissions as full research papers, case studies, visual papers or workshop proposals. The case studies and visual papers submission categories were introduced for the first time in this conference. The idea for the visual papers' category came from the Engineering and Product Design Education (E&PDE) conference which introduced this submission category at its 2018 event (Childs et al., 2018). The idea for the case studies was taken from the 2019 Academy for Design Innovation international conference (Bohemia et al., 2019).

After a round of double-blind peer review process, which was supported by 219 members of the International Scientific Panel⁷, 50 (30%) submissions were accepted, 56 (34%) submissions were provisionally accepted⁸ pending satisfactory further peer reviews managed by the track chairs, and 58 (35%) submissions were rejected. This was followed by the subsequent peer review process involving the track chairs and co-chairs. The outcome of this final process was the inclusion of 91 submissions, which were scheduled in the conference programme and included for publication in the proceedings. The overall acceptance/rejection rate across the four categories was 46% (see Table 1), which is on par with the general DRS biennial international conferences (Boess et al., 2020).

⁷ Please see the full list on page ii.

⁸ If both peer reviewers indicated that a submission required a major revision then the submission was rejected outright.

Table 1. Submissions received for the 6th International Conference for Design Education Researchers: DRS Learn X Design 2021

	Received	Accepted	Rejected
Aggregate	168	91 (54%)	46%
Research Papers	103	53 (51%)	49%
Case Studies	39	24 (61%)	39%
Workshop	19	11 (7%)	58%
Visual Papers	7	3 (4%)	43%

Laying Out the Track Themes

With the aim of living up to the expectations of the 10th anniversary conference, one of the major concerns of the organisers was to articulate its relevance and appeal to attract diverse international design research community. The tracks facilitated achieving this goal. The tracks, by defining the conference scope by defining the subject matter and the extent to which the topics are explored, are the backbone of a conference. The tracks overview the existing pathways, determine new ones for research in an area, and set up the community for the conference. With its tracks, a conference can draw attention to the significance of a discipline and address the members of its community.

One of the particularities for the organization of this conference was the openness that the organisers strived to achieve, with voice given to a wide group of international scholars. The conference track themes were constructed altogether with a motivated group of international scholars and colleagues leading the process as track chairs and co-chairs. The track chairs from diverse backgrounds were invited to propose the themes guided by their specific research. Thus, the LxD 2021 tracks' scope diverted from traditional design education conferences which focus is explicitly on educational topics such as assessment or student group work. Instead, the LxD 2021 tracks themes were guided by specific tracks' chairs research areas, like how problems framing limits the potential solutions, and then related this area to education.

As the International Academic Organising Committee, we were very excited to be working together in this process. With the aim of making this process beneficial beyond experienced researchers, it was decided to give an opportunity to early career researchers in chairing a track for this conference. A call was made in August 2020, titled *Fishing for the Big Idea*. This is how the track *Futures of Design Education* was incorporated into the conference, with four early career researchers leading the process (see Figure 2, and Volume 4, on page 854).



Figure 2. Fishing for THE BIG IDEA™; The team of the early career researchers, the School of Small Fish, who initially proposed the theme: Bauhaus is Dead!

A total of 44 track chairs and co-chairs⁹ from 14 countries (Australia, Baltimore County, Brazil, Canada, Chile, China, Colombia, Denmark, Finland, Germany, India, Netherlands, Norway, Sweden, Turkey, UK, USA) worked together and in parallel, in bringing their own approaches and points of view, with topics that supported and complemented one another, and allow the germination of new discussions in the area. The wide geographical distribution required synchronisation among all which was facilitated by regular meetings distributed into an extending timetable, and long collaborative working hours. Many meetings were held online, with the altruism of the track chairs who were in different parts of the world (see Figure 7). Despite the challenges, these meetings also brought the benefits of including diverse perspectives which led to new ideas.



Figure 3. Regular meeting of track chairs and co-chairs provided opportunity to shape the conference scope

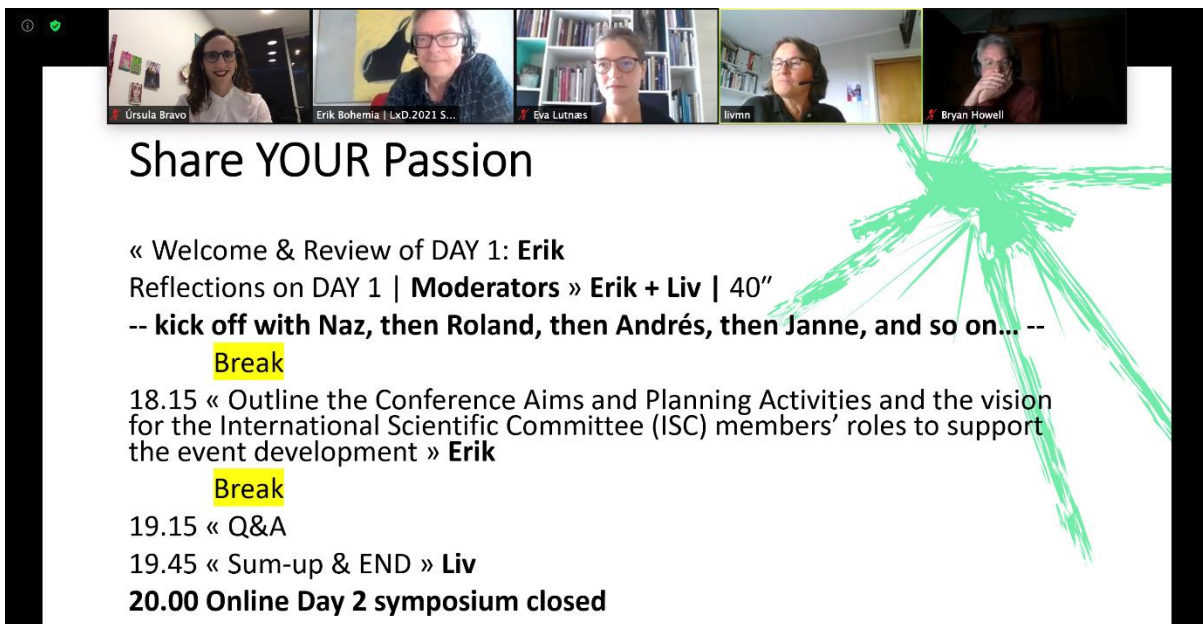


Figure 4. Share your Passion opening session for the Articulation of Alternate Futures symposium, which was held in September 2020, provided the track chairs with opportunity to know each other’s interests

⁹ Track chairs and co-chairs are listed under the heading *International Scientific Panel* on page i.

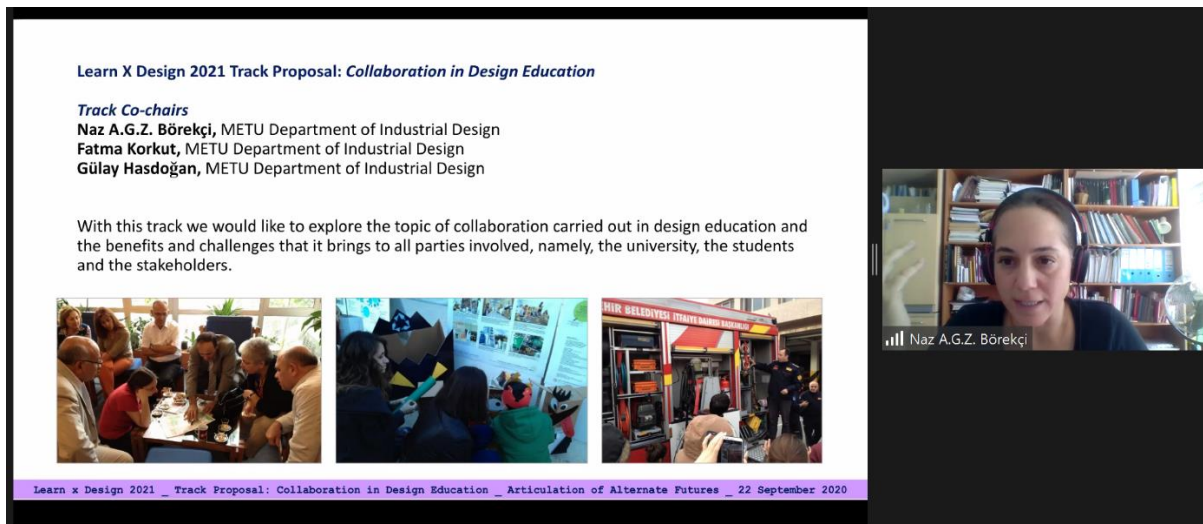


Figure 5. Naz A.G.Z. Börekçi outlining a track proposal titled 'Collaboration in Design Education' at during the 'Articulation of Alternate Futures' symposium which was held in September 2020.

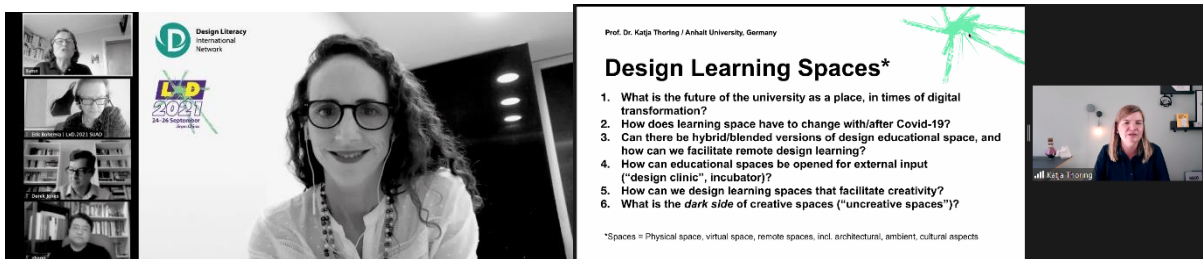


Figure 6. On the left, Liv Merete Nielsen introduced Úrsula Bravo who proposed the track titled 'Design Thinking to Improve Creative Problem-solving' and on the right, Katja Thoring outlined proposal for the track titled 'Design Learning Spaces' during the 'Articulation of Alternate Futures' symposium which was held in September 2020.

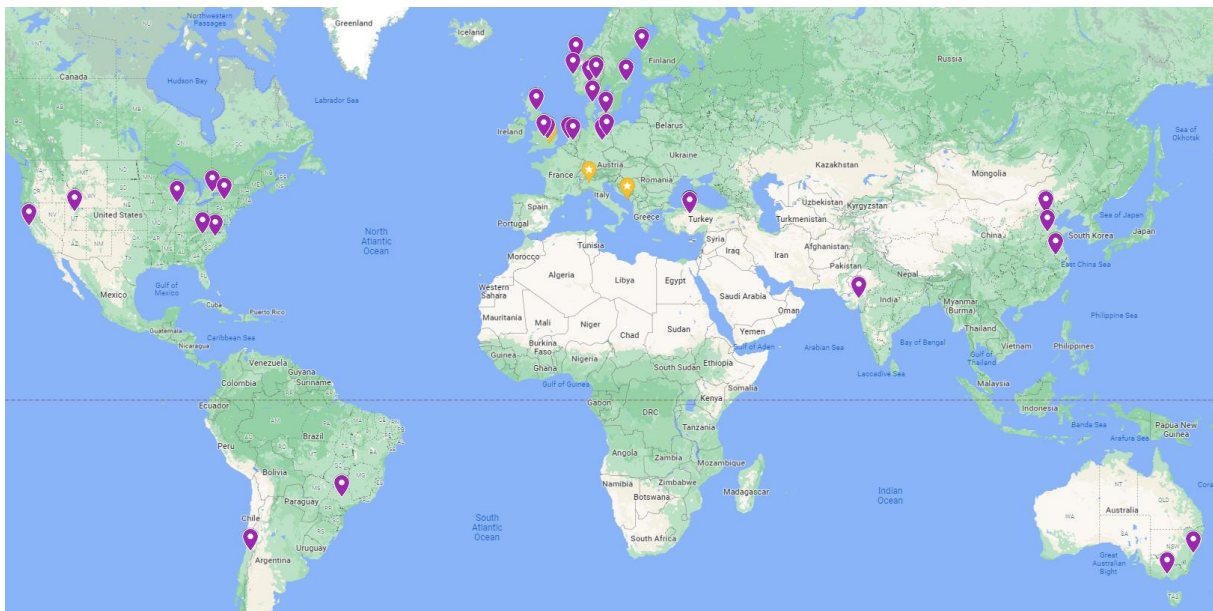


Figure 7. The geographical location of the LxD 2021 Track chairs and co-chairs

The 10-year anniversary conference programme and the four-volume conference proceedings have been organised within the 10 track themes managed by the track chairs with support from their co-chairs (see Table 2).

Table 2. List of Tracks and Submission Categories

Track Nº	Track Title	Submission Types			
		Full Research Papers	Case Studies	Workshops	Visual-Papers
Track 01	Design Thinking to Improve Creative Problem-solving	o	o	o	
Track 02	Empowering Critical Design Literacy	o	o	o	
Track 03	Alternative Problem Framing in Design Education	o	o	o	o
Track 04	Collaboration in Design Education	o	o	o	
Track 05	Co-creation of Interdisciplinary Design Educations	o	o		
Track 06	Learning Through Materiality and Making	o	o		o
Track 07	Sketching & Drawing Education and Knowledge	o	o	o	o
Track 08	Design Learning Environments	o	o	o	o
Track 09	Futures of Design Education	o	o	o	o
Track 10	Design Educators as Change Agents	o	o	o	

The track titled **Design Thinking to Improve Creative Problem-solving** chaired by Úrsula Bravo and co-chaired by Catalina Cortés, Jeannette LaFors, Andrés Téllez and Natalia Allende asked scholars to consider the challenges of taking design-based approaches those who do not intend to be trained as designers such as children, youth, teachers, and leaders in schools, universities, and other educational contexts (Bravo et al., 2021), see the track's introduction on page 59.

The **Empowering Critical Design Literacy** track chaired by Eva Lutnæs and cochaired by Karen Brænne, Siri Homlong, Hanna Hofverberg, Ingvill Gjerdrum Maus, Laila Belinda Fauske and Janne Beate Reitan aimed to explore the current educational practices, academic discourses and implications of design education empowering for critical design literacy (Lutnæs et al., 2021), see the track's introduction on page 222.

The next track titled **Alternative Problem Framing in Design Education**; chaired by Lesley-Ann Noel, and co-chaired by Renata Marques Leitão, Hannah Korsmeyer, Sucharita Beniwal, and Woodrow W. Winchester III, was asking scholars to consider how we might move design education away from problems, pain and othering (Holliday et al., 2010) towards positive models of framing challenges such as joy, desires, utopia and other positive or alternative re-frames (Noel et al., 2021), see the track's introduction on page 277.

The following track **Collaboration in Design Education** chaired by Naz A.G.Z. Börekçi and co-chaired by Fatma Korkut and Gülay Hasdoğan intention was to explore the benefits and challenges of collaboration in design education. For example, the submissions tackled issues related managing collaborations and strategies which facilitate maintenance and commitments of the parties to support design education (Börekçi, Korkut, & Hasdoğan, 2021), see the track's introduction on page 322.

The **Co-creation of Interdisciplinary Design Educations** track which was chaired by Arild Berg and co-chaired by Camilla Groth, Fausto Medola and Kate Sellen, focus was on the challenges related to co-creation practices when disciplinary world views 'crash' and what the implications of these are for design education (Berg et al., 2021), see the track's introduction on page 476.

The **Learning Through Materiality and Making** track which was chaired by Juha Hartvik and co-chaired by Mia Porko-Hudd and Ingvild Digranes was informed by the Scandinavian educational practices which aimed to provide children and young people an opportunity to process materials in order to gain experience, knowledge and learning that can be useful at different stages of life, in study, professional and leisure activities (Hartvik et al., 2021), see the track's introduction on page 604.

The **Sketching and Drawing Education and Knowledge** track which inspired the new submissions Visual Papers category was chaired by Bryan F. Howell and co-chaired by Jan Willem Hoftijzer, Mauricio Novoa Muñoz, Mark Sypsteyn, and Rik de Reuver focused was on research that reveals insights into how and why sketching and visual knowledge is reflected in education (Howell et al., 2021), see the track's introduction on page 626.

The **Design Learning Environments: Exploring the Role of Physical, Virtual, and Hybrid Spaces for Design Education** chaired by Katja Thoring and co-chaired by Nicole Lotz and Linda Keane provided a rich forum for the scholars explore how the physical and digital spatial environments of educational institutions can be designed in order to better facilitate learning (Thoring et al., 2021), see the track's introduction on page 687.

The track titled **Futures of Design Education: Beyond Time & Space** which was chaired by Yashar Kardar and

co-chaired by Lilyana Yazirlioğlu, Ayşegül Özçelik, and Sarper Seydioglu was based on recent graduates' experiences. The track asked the scholars to venture beyond the 'studio' to explore possibilities of new design education models conscious of members' social dynamics, identities, communities, and their role in enabling new education models which are more inclusive, personalised, and sustainable (Kardar et al., 2021), see the track's introduction on page 856.

The final track titled **Design Educators as Change Agents** which was chaired by Yang Zhang and co-chaired by Xiang Xia and Ziyuan Wang. The track's broad theme focused on design educators as change agents of design education (Xia et al., 2021), see the track's introduction on page 920.

The four submission category types

In addition to the ten tracks, the prospective authors were able to select one of these four submission categories:

- Research Papers
- Case Studies
- Visual Papers
- Workshop Proposals

The full **research papers** submissions were between 3500 and 6000 words in length. The **case studies** provided a platform for sharing a reflective account of a project(s). The case studies submissions were between 1500 and 3000 words in length. The **workshop proposals** provided an opportunity for scholars to explore new and emerging practices and research topics, facilitate debates, gather data, and test on-going research. They enabled practitioners to showcase their work in collaboration with design researchers. The workshop proposal submission were no more than 1500 words. The **visual papers** allowed scholars to use sketched images to communicate the primary information while text plays a supporting role. The visual papers needed to contribute new knowledge.

Preparatory Events

Two international events supported the main conference and marked certain milestones in the preparations. The first event was titled *Articulations for Alternate Futures*. It was an open symposium that took place one year prior to the conference, on 22–23 September 2020. The *Articulations for Alternate Futures* symposium invited prospective conference track chairs to introduce their main themes. The purpose was to articulate potential track themes and then further develop them in relation to each other, thus making sure that the themes complemented one another rather than compete. How the calls could be made or improved were also discussed to make sure the call for submissions would be open and addressing a wide range of academic, practical and research interests. The symposium was open to the participation of an extended audience, who were interested in the conference topic and would consider contributing. Altogether, over 110 participants have joined the two-day online symposium. Based on the discussions, the tracks were reorganised, merged, shuffled and reformed until the call for submissions was made in February 2021.



The image shows a Zoom meeting interface. On the left, a slide titled "Articulation of Alternate Futures" is displayed. The slide has a purple header with the title in yellow and orange. Below the title, it says "22 September 2020". A list of cities and times is shown: 19:00 Jinan | 14:00 Ankara | 13:00 Oslo, Berlin | 12:00 London | 8:00 Santiago de Chile | 7:00 New Orleans, LA | 4:00 Bogota | 5:00 Provo, UT. The main content of the slide is for a session at 20:25 (Jinan, China time) titled "The Pivot Point of your Track Theme – Round 2". The session moderator is "Liv Merete Nielsen + Naz A G Z Börekçi". A list of six speakers follows: 1. « Eva Lutnaes, Oslo Metropolitan University, Norway; 2. « Andrés Téllez, University of Bogota Jorge Tadeo Lozano, Colombia; 3. « Úrsula Bravo, Universidad del Desarrollo, Chile; 4. « Yang Zhang, SUAD, China; 5. « Bryan Howell, Brigham Young University, USA; 6. « Roland M. Mueller, Berlin School of Economics and Law (BSEL), Germany. At the bottom of the slide, it says "21.10 Close the event: Liv". On the right side of the Zoom window, there is a video feed of Naz A.G.Z. Börekçi, a woman with dark hair, wearing a headset, sitting in front of a bookshelf.

Figure 8. Naz A.G.Z. Börekçi is outlining programme for the *Articulation of Alternate Futures* symposium, which was held in September 2020.

The second supporting event was the *Explorations of Alternate Futures* symposium, held on 10–11 May 2021, where track chairs and organisers came together to rehearse the programme and the setting for a more inclusive and fulfilling online conference experience. This two-day symposium was attended by around 90 participants.

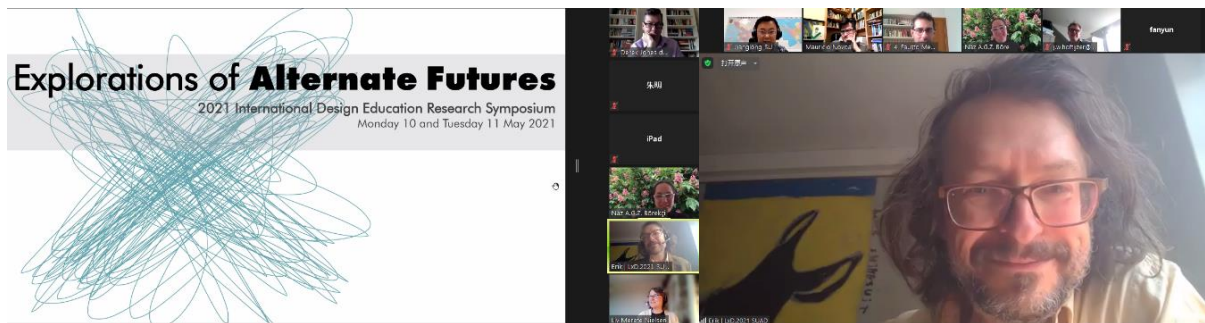


Figure 9. *Exploration of Alternate Futures* symposium which was used to prototype the online conference delivery

The online symposium held a year ahead of the conference helped the organisers to prototype the September 2021 conference and to identify which elements should be kept and which needed to be discarded. For example, the online parallel sessions were envisaged to take place in the breakout rooms, thus simplifying how delegates might enter the conference as they needed only one online meeting link. However, the online Zoom platform allowed only one interpretation channel to and from Chinese across all the breakout rooms. Thus, subsequent parallel sessions had dedicated meeting links. The timing and overall rhythm of the session delivery, social events and regular breaks were also tested. On the other hand, demonstration of the traditional Baduanjin stretching exercise by Master Ms. Feng Yujuan during the breaks was one of the highlights of this event. The event participants were introduced to eight Baduanjin basic steps. Fatma Korkut, 2019 LxD co-chair, stated that:

In general, I think the mood was perfect; people felt engaged and motivated. Geographical and institutional diversity was high. Thematic diversity was not that high, in my opinion. Perhaps some tracks intersect heavily around design thinking and design literacy. I felt excited about mini-exhibitions concerning visual design thinking (Bryan), and data-driven design (Roland). The presentation by young researchers was terrific; I listened to it with tongue in cheek :) We should have more student presence in this conference series. Plus, we need to encourage more visual events.

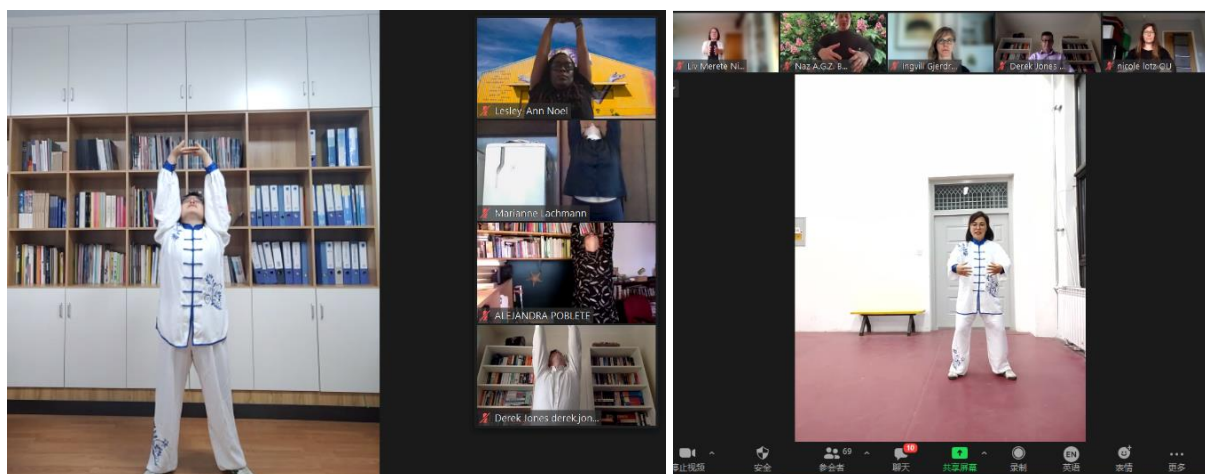


Figure 10. Master Ms. Feng Yujuan demonstrated the traditional stretching exercise: Baduanjin

Derek Jones, the DRS Design Education SIG convener, described the LxD 2021 planning process as

...inverting the normal conference procedure. Instead of a closed, small committee (that gets larger), it will be a wider, more open and inclusive community of organising contributors from the start. Instead of waiting to see what papers might be received and how to organise their review, it will make the

contribution process an integral part of the conference process, again, from the very start. It is this change in process that is particularly exciting and one that is potentially a better template for academic quality.

Derek perceived that the adopted conference planning and organising provided the following benefits:

Firstly, it avoids 'track isolation', where track chairs are responsible for everything as individuals - almost as mini conferences in their own right. Whilst this can work well in some subjects, the LxD 2021 proposal was to avoid such separation and isolation. This has already begun with this first symposium, where negotiation and discussion of subjects and themes between track chairs was in evidence, exploring domain overlaps and synergies. This will continue through the online platform.

Secondly, it shares knowledge between track chairs and subject domains which assists with the work and effort involved in being a track chair. Already, the sharing that took place in the first symposium indicates that contributors are keen to assist with this and with the best of intentions - to make each track as academically competent as possible.

Thirdly, it builds community. This was enabled right from the introduction through the setting, the tone and the intention of conference and process. Introducing track chairs to one another has already established a number of new connections that were evidenced in the discussion during the second day. Many follow-ups have taken place (not least for me!) and this will only continue, developing both the social and academic community of design educators.

Fourthly, it will improve the academic quality of the work. By making gate process more visible it becomes more easily open to questioning and scrutiny (something also encouraged directly by Erik and the team). This, in turn, helps co-develop a community understanding of quality as well as the boundaries of this quality. It also supports and fosters new academics, helping them to see what a peer review process is (and is not!), as well as inviting them to contribute to its shaping.

Finally, however it has been achieved, there was no sense of anyone acting as if they knew more than anyone else - no grandstanding; no arrogance; no 'appeals to authority'. This felt like a community willing to listen to and evaluate each others' experience of knowledge and quality in design education research. This is the best traditions of a Community of Practice - something familiar to designers and design educators alike.

And, of course, it's critical not to forget the importance of facilitation and organisation. All too often the work behind the scenes is invisible and the event itself can seem easy, simple and effortless. That the team made it look like easy was obviously due to significant effort and professionalism. The event was superbly hosted (accommodating, personable, relaxed, inclusive) and felt clearly supported academically and professionally.

The Derek's account has captured the spirit the organisers aimed to foster a more inclusive and open collaboration to break away from the dominant hierarchical conference planning and organisation. The idea was to bring on board voices which are generally excluded from these events which meant to preconfigure (Raekstad & Saio Gradin, 2019) and distribute the decision making and responsibility to a wider cohort of participants.

Following the Exploration of Alternate Futures symposium, the contributing authors were notified of their submission status. Thirty percent of the submissions were accepted, and 35% were provisionally accepted, requiring a second round of revisions which were managed by the specific track chairs. The camera-ready papers¹⁰ were finally received on the 8th of June 2021. This meant the organisers were ready to work on the conference proceedings and prepare the conference programme.

Decision Time

Around this time, May 2021, a difficult decision had to be made, of carrying out this conference online rather than face to face in China, under the generous hospitality of SUAD. The main reasons for this were the ongoing Covid-19 pandemic, and the difficulties due to traveling restrictions and different travel administrations across the world. It would have been wonderful to have the conference face to face in China, and meeting with the DRS LxD 2021 community there, but unfortunately this has not been possible.

Regardless of the change of setting, the conference preparations continued for hosting a memorable

¹⁰ These would form these conference proceedings.

conference and accommodating the community in the best ways possible. Many long working hours, working out of details and resolving technical issues have taken place in the background, from a group of dedicated people. Special thanks are owed to Jianglong Yu, the Conference General Secretary, and the Local SUAD Team, in the coordination of all this.

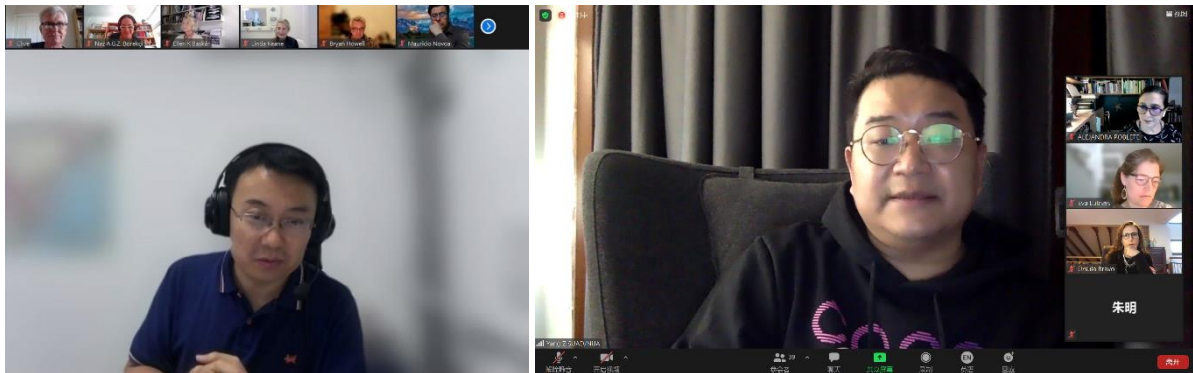


Figure 11. On the left, Jianglong Yu, the Conference General Secretary who worked closely with Yang Zhang, the International Academic Organising Committee co-chair.

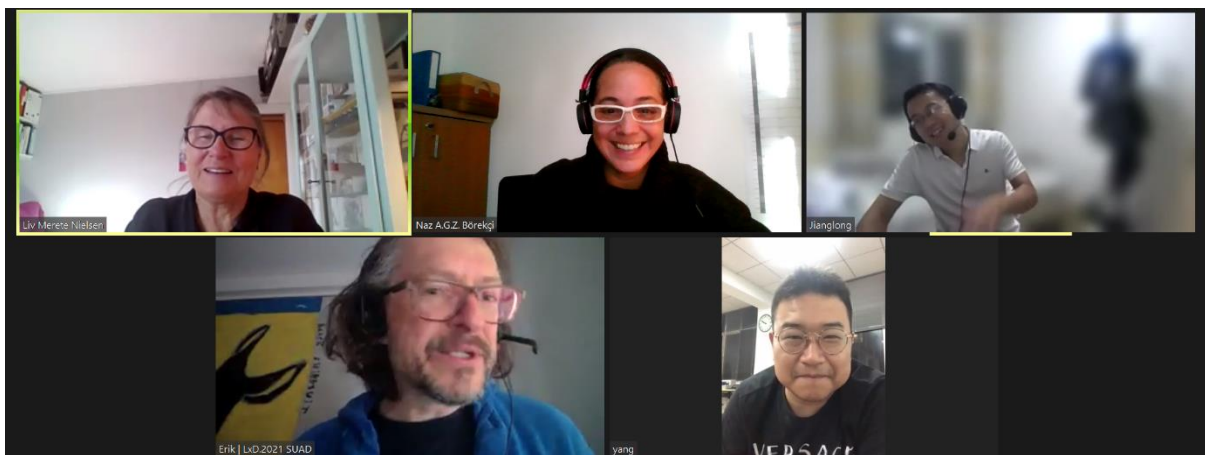


Figure 12. One of the many regular planning meetings of the International Academic Organising Committee members



Figure 13. The local conference organising team was led by SUAD President Professor Pan Lusheng

Conference Visual Identity

A sense of community can be conveyed and strengthened with the branding and visual identity for a conference. Many thanks to Katja Thoring for her efforts in developing the visual identity for the DRS LxD 2021 conference. She has produced countless propositions for the logo and its adaptation into graphic assets to be used on the conference website, proceedings cover, submission templates, social media announcements and email banners.



Figure 14. 'Call for Submissions' website banner (author: Katja Thoring)



Figure 15. 'Call for Submissions' DRS banner (author: Katja Thoring)

With the hopeful expectation of the conference to take place face to face in China, she also has developed propositions for prints of fabric masks to be distributed to participants (Figure 17, left). The DRS LxD 2021 logo is based on the "X" of the conference's name. The initial ideas were developed in SUAD, with the green splash centred in order to form the "X", indicating the "mark" that the conference leaves behind. Katja developed this idea into a fuzzy but focal "X", representing the intersection of dense and repeated movements, indicating the crossing of paths and leaving multi-coloured marks as a community.

The conference visual identity was strengthened with the fascinating graphics developed exclusively for the DRS LxD 2021 conference, by students from Chinese universities, co-ordinated by their professors, and by the Local SUAD Team. More than 100 separate images were produced, representing the ox, which is the zodiac sign of the year 2021 (Figure 17, Right). In Chinese culture, the ox symbolises wealth, prosperity, diligence, and perseverance. This Chinese zodiac sign marks the year 2021 as one of heavy responsibilities and endurance, to which it is surely easy to relate.

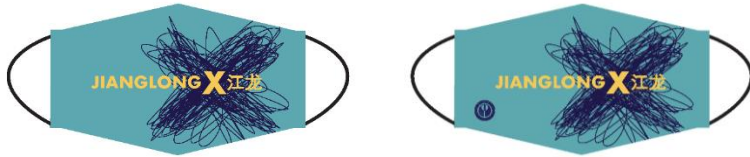


Figure 16. Mask design by Katja Thoring which protected the conference participants as well as identify them, thus reducing the need to produce name badges.

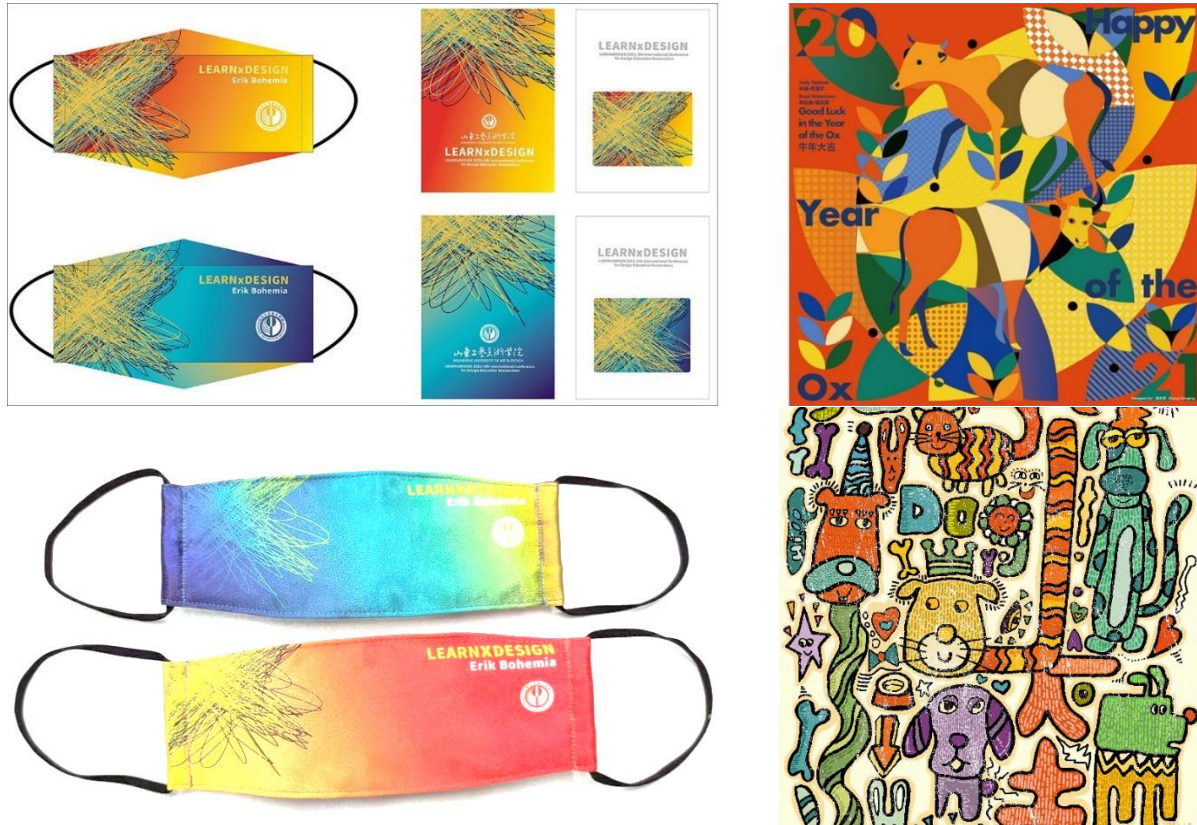


Figure 17. Left: Early visual identity explorations for conference participants' masks and proceedings cover, by Prof. Zhang Yan. Right: An example of the graphic images produced by SUAD for the "year of the ox" of the "year of the dog".

Conference Programme

The DRS Learn X Design 2021, 6th International Conference for Design Education Researchers has accommodated ten tracks responding to the main conference theme *Engaging with Challenges in Design Education*. The proceedings have been organised into 10 sections each corresponding to one of the ten tracks. The tracks' chairs and the co-chairs introduced by the specific (Berg et al., 2021; Börekçi, Korkut, & Hasdoğan, 2021; Bravo et al., 2021; Hartvik et al., 2021; Howell et al., 2021; Kardar et al., 2021; Lutnæs et al., 2021; Noel et al., 2021; Thoring et al., 2021; Xia et al., 2021). We would like to thank the track chairs and co-chairs for their involvement in the chairing of the tracks, and the selfless work they have placed into the quality of the track contributions (Table 2, page 5).

To enable the participation of delegates from all over the world within reasonable day times, the International Academic Organising Committee decided to schedule compact daily programmes lasting around 5 to 6 hours, including frequent social breaks. The compacted schedule resulted in having up to 8 parallel sessions to accommodate the accepted presentations and workshop deliveries. Taking the Central European Time as the basis, the programme hours indicated an early morning for the participants located in the Western Hemisphere, afternoon time for those located around the Greenwich Time Zone, and the evening times for the participants located in the Eastern Hemisphere.

Scientific Programme

In total, the scientific programme of the conference included 28 presentation sessions for the delivery of 80 research papers, case studies and visual papers, and 12 workshop sessions for the delivery of 11 workshops. The three-day programme for the conference accommodated plenary sessions to begin each day.

Day One

On the first day, 24 September 2021 Friday, following the conference opening by Erik Bohemia, the welcome speeches were given by Professor Pan Lusheng, the President of SUAD (see Figure 20), the general conference chair; and Professor Liv Merete Nielsen (see Figure 30), the chair of the International Scientific Programme Committee. The plenary session of the first day included keynote addresses by the five track chairs: Linda Keane, Úrsula Bravo (see Figure 19), Eva Lutnæs (see Figure 18), Naz A.G.Z. Börekçi and Bryan Howell. Two parallel sessions were carried out, one for paper presentations and one for the workshops.

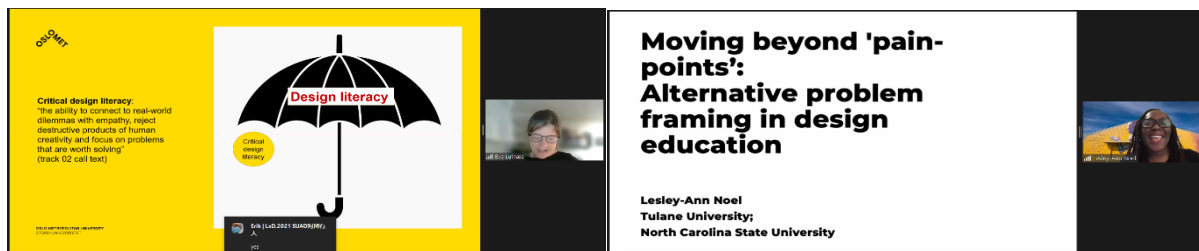


Figure 18. On the left Eva Lutnæs introducing the track Empowering Critical Design Literacy and on the right Lesley-Ann who chaired the track Moving Beyond Pain-Points: Alternative Problem Framing in Design Education.



Figure 19. Úrsula Bravo introduces the track Design Thinking to Improve Creative Problem-solving.

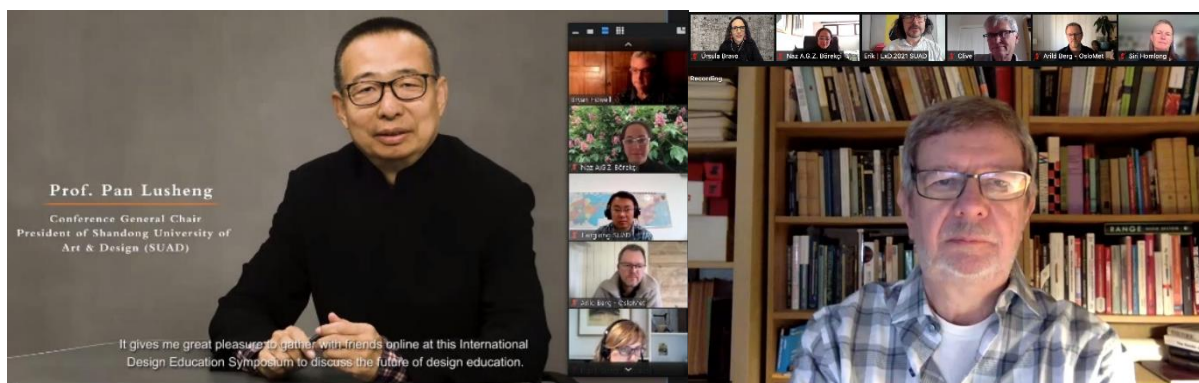


Figure 20. Left: Professor Pan Lusheng, President of SUAD, giving his welcome speech, 24 September 2021. Right: Professor Richard Buchanan, giving his keynote address, 25 September 2021.

Day Two

On the second day, 25 September 2021 Saturday, the plenary session included keynote addresses by the three track chairs: Lesley-Ann Noel (see Figure 18), Arild Berg, and Xiang Xia.

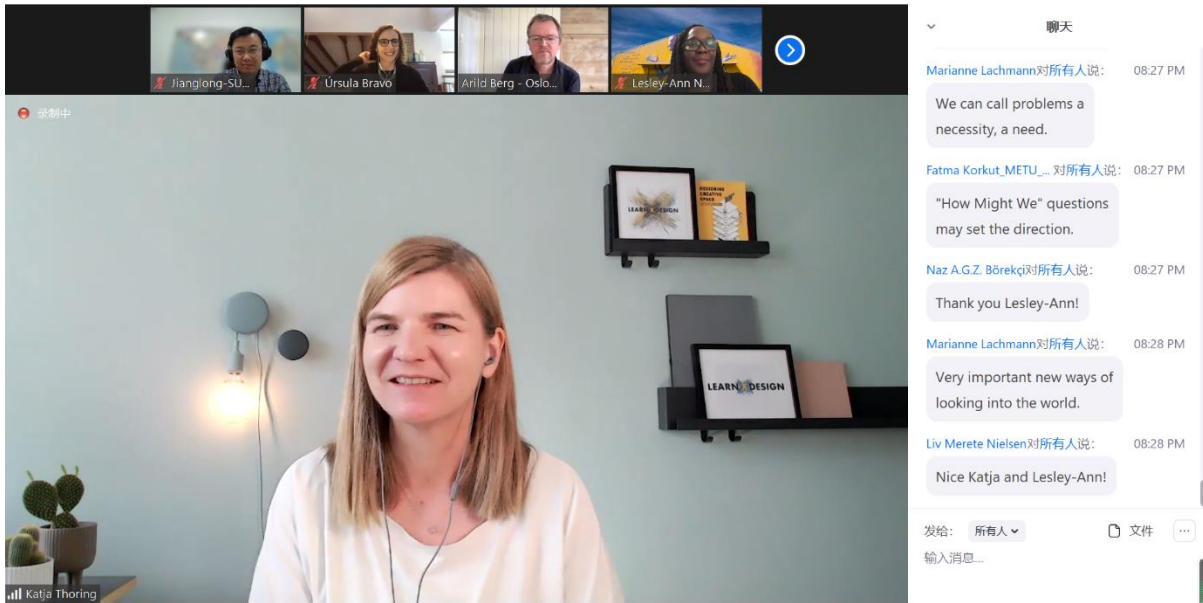


Figure 21. Katja Thoring, who chaired the track Design Learning Environments, is addressing questions from participants.

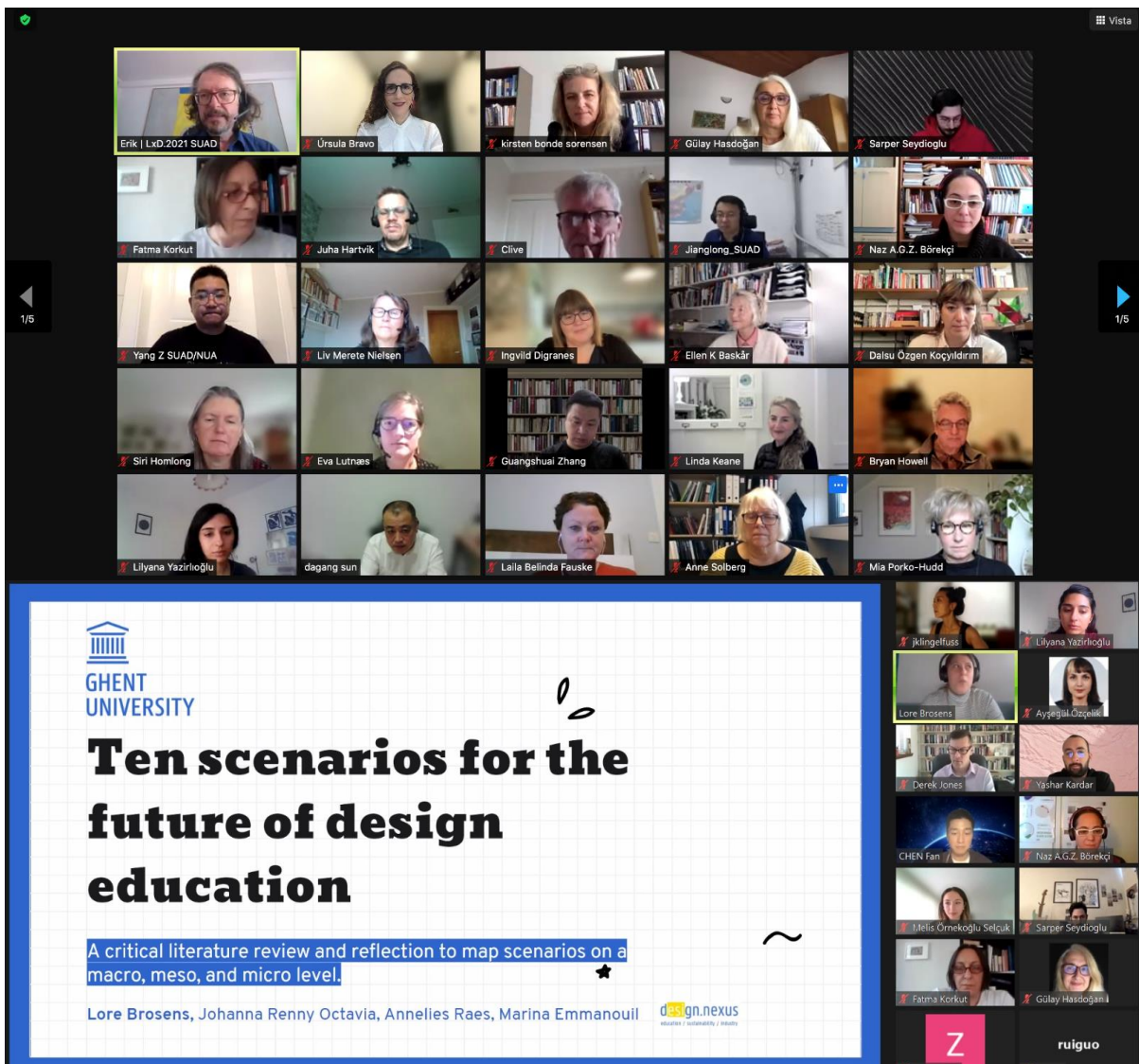


Figure 22. Presentation by Lore Brosens

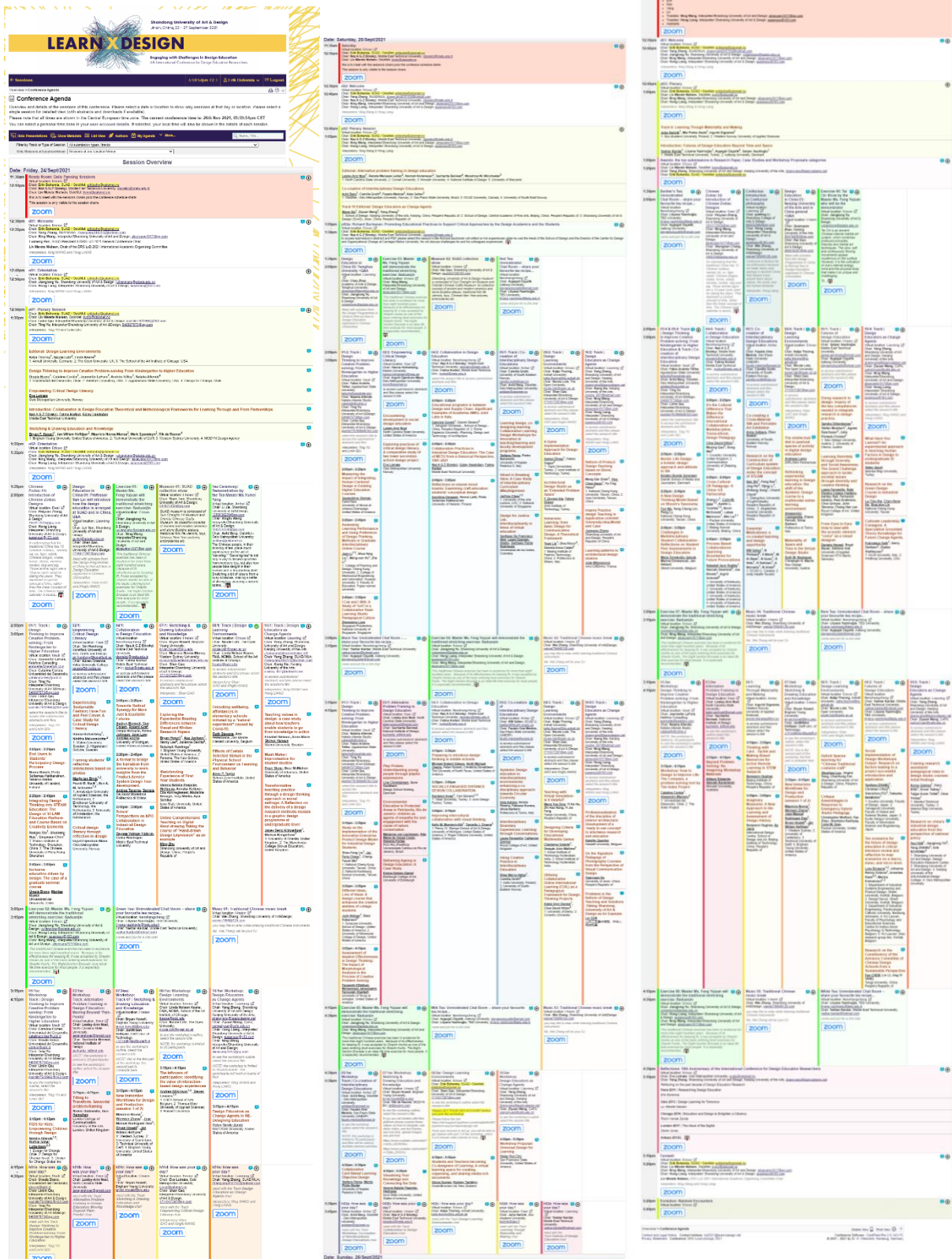


Figure 23. The three-day conference programme pattern of session distribution. Each column represents one of days, from left day 1, middle day 2 and on the right is the day 3.

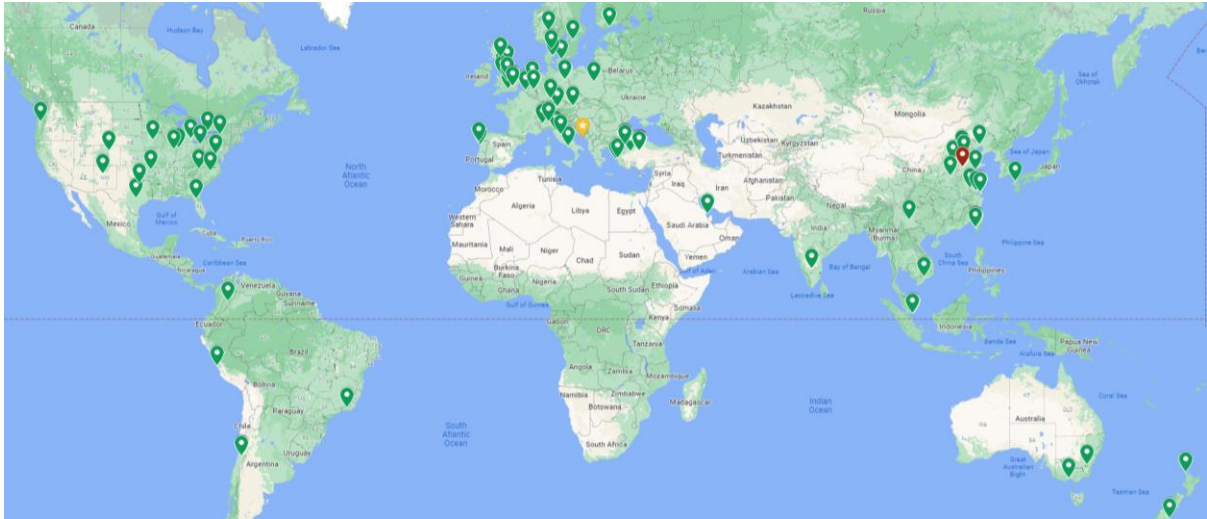


Figure 24. The distribution of authors of the accepted submissions.

This was followed by the keynote address by Professor Richard Buchanan, titled *Promoting Educational Practices to Support Critical Approaches by the Design Academics and the Students*. Richard Buchanan is Professor of Design & Innovation at Weatherhead School of Management, Case Western Reserve University and Chair Professor of Design Theory, Practice, and Entrepreneurship, College of Design & Innovation, Tongji University. He is one of the editors of the *Design Issues: A Journal of design history, theory, criticism* published by MIT Press. Buchanan reflected on his experiences while he was the Head of the School of Design and the Director of the Center for Design and Organizational Change at Carnegie Mellon University (Buchanan, 2004). He discussed the challenges he and his colleagues experienced while trying to develop educational practices which will support critical approaches by the design academics and the students. Although most of the design schools, faculties, departments are aiming to develop more critical practices, implementing and embedding the critical pedagogical practices are extremely challenging as it requires the cultural transformation of the practices of how the design academics are trained (educated), see Figure 20.

Three parallel sessions were conducted on this day, dedicated mostly to paper presentations and for workshops.

Day Three

On the third day, 26 September 2021 Sunday, the plenary session included keynote addresses by the two track chairs: Juha Hartvik and Yashar Kardar.

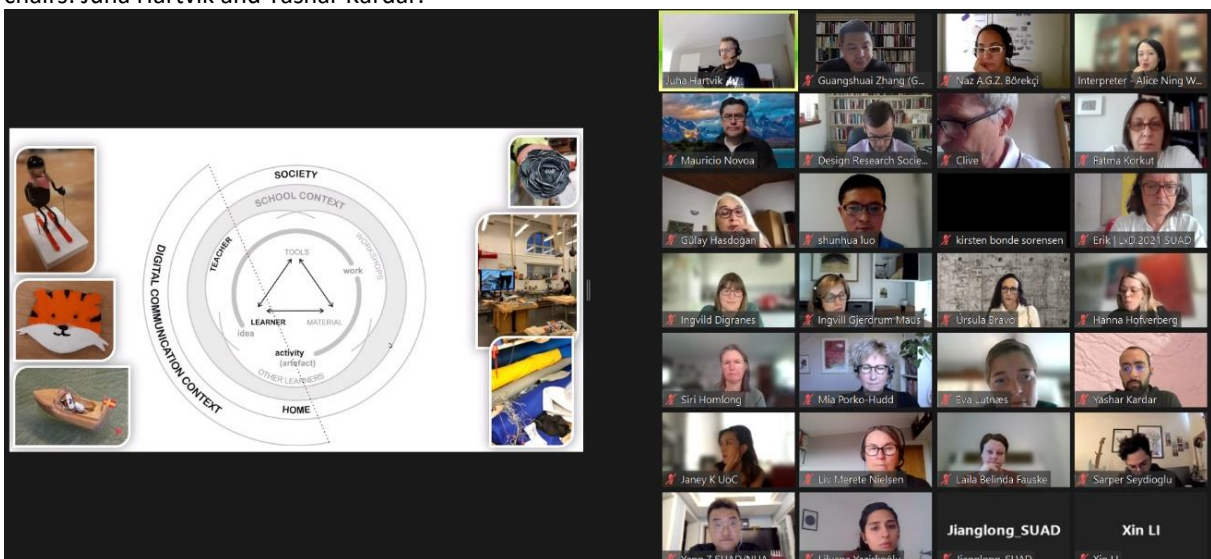


Figure 25. Juha Hartvik introducing the track Learning Through Materiality and Making.

This was followed by the announcement of the awards, *Top Submissions in Research Paper, Case Studies and*

Workshop Proposals Categories, carried out by Liv Merete Nielsen and Yang Zhang. Two parallel sessions were conducted on this day for paper presentations and workshops.

Top Awards

Three categories for top awards were selected based on the double-blind evaluation from the peer review members of the *International Scientific Review Panel*. The three categories were: Research Paper, Case Studies and Workshop Proposals. They are listed alphabetically following the first author's name.

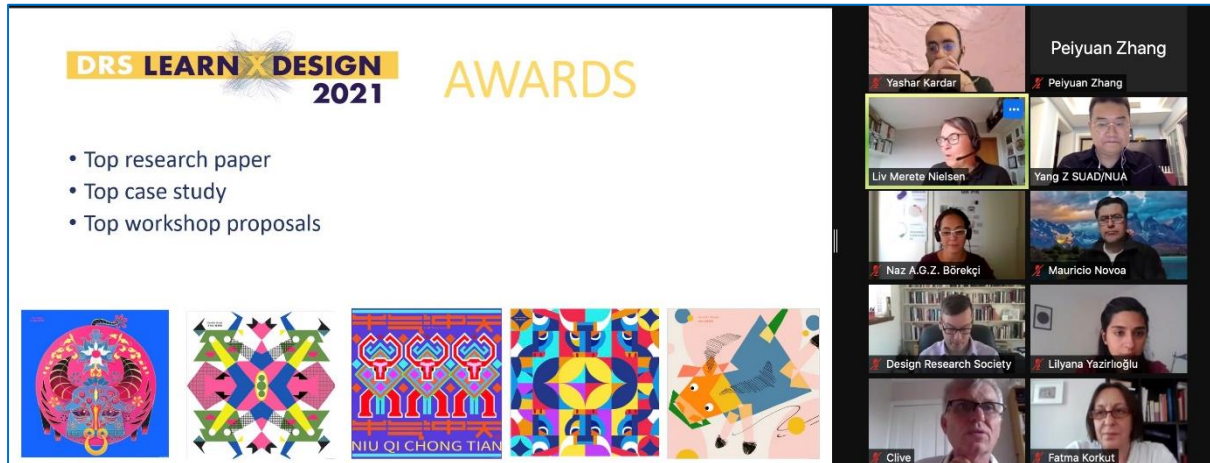


Figure 26. Liv Merete Nielsen and Yang Zhang chaired the Awards Ceremony for the research and visual papers, workshop proposals and case studies.

Top Research Papers

The following nine research papers were awarded.

- Systemic Design Education in Interdisciplinary Environments: Enhancing A Co-Disciplinary Approach Towards Circular Economy
Track 05, A. Aulisio; A. Pereno; F. Rovera; S. Barbero
- Ten Scenarios for the Future of Design Education: A Critical Literature Review and Reflection to Map Scenarios on a Macro, Meso, and Micro Level
Track 10, L. Brosens; J. R. Octavia; A. Raes; M. Emmanouil
- Collaboration Practices in Industrial Design Education: The Case of METU from a Historical Perspective, 1981-2021
Track 04, N. A. G. Z. Börekçi; G. Hasdoğan; F. Korkut
- Exploring the Experiential Reading Differences Between Visual and Written Research Papers
Track 07, B. Howell; A. Jackson; H. Lee; J. DeVita; R. Rawlings
- I Can and I Will: A Study of 'Grit' in a Collaborative Team Learning Studio Pedagogical Culture
Track 01, Z. Liow
- Study on the Implementation of the Innovative Enterprise Product Design Model for Industrial Design Students
Track 01, S.-F. Liu; J.-F. Chang; C.-T. Wu
- Different Ideas, Lots of Ideas: A Design Course that Enhances the Creative Abilities of College Students
Track 01, J. Nyboer; B. Hokanson
- Measuring the Impact of Integrating Human-Centered Design in Existing Higher Education Courses
Track 01, S. Shehab; C. Guo
- Reform of Product Design Teaching Based on Bionic Concepts
Track 11, M.-D. Shieh; H.-C. Hsiao; Y.-T. Hsiao

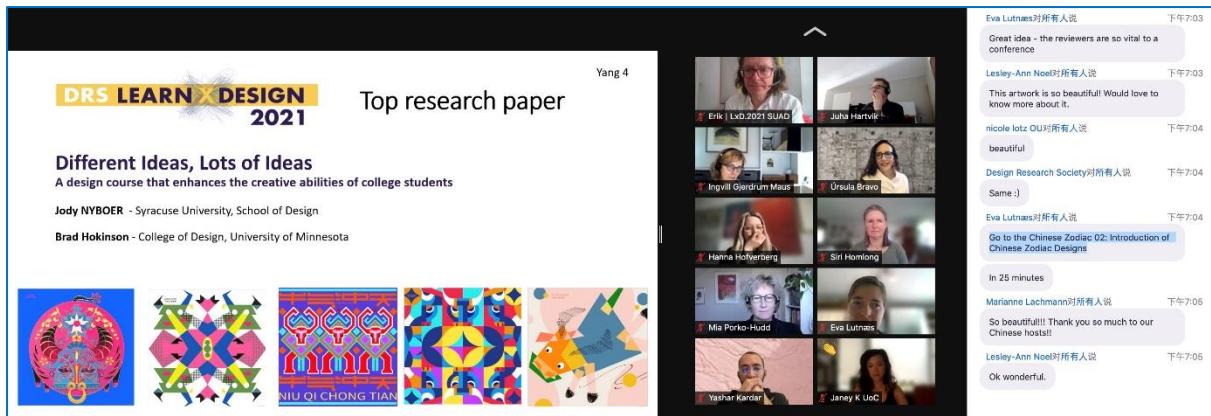


Figure 27. Presentation of Awards in the Research Papers category

Top Case Studies

- Preparing to Introduce Design Thinking in Middle Schools
Track 04, M. R. Gibson; K. M. Owens; P. Hyland; C. Donaldson
- Essential Siloed in Breaking Silos: A case of Interdisciplinary Curriculum (Mis)Alignment
Track 05, JiaYing Chew
- Mash Maker: Improvisation for Student Studios
Track 11, R. Slone; B. McMahon

Top Workshop Proposals

- Workshop: How to Design to Improve Life: The Compass, A Problem-Solving Tool by The Index Project
Track 01, C. Cortes; M. Alesandro
- Tilting to Transform: Sensorial Problem-Framing
Track 03, N. Sadowska; T. Hanrahan

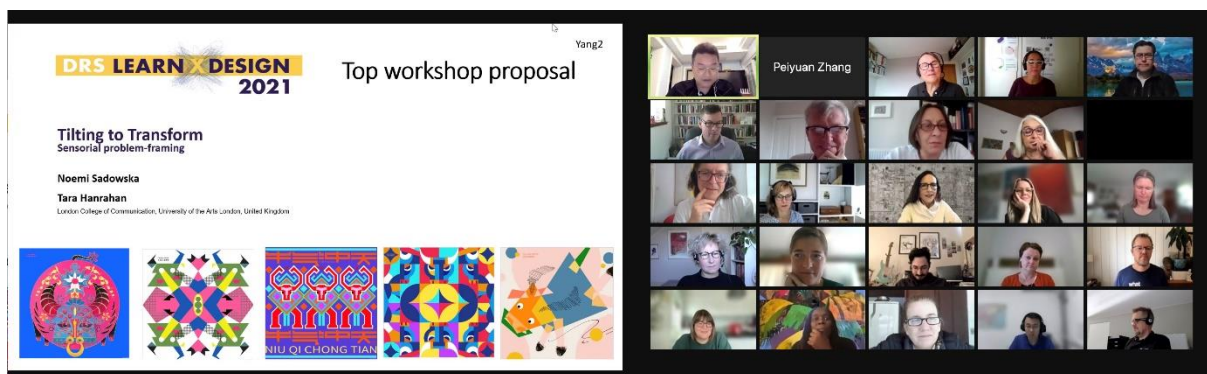


Figure 28. Presentation of Workshop Proposals Awards.

The final plenary session celebrated the 10th anniversary of the Learn X Design conference series. This session brought together the organisers and chairs of the past Learn X Design conferences: Erik Bohemia, Paris 2011 (Bohemia, 2021); Liv Merete Nielsen, Oslo 2013 (Nielsen, 2021); Robin Vande Zande, Chicago 2015 (Vande Zande, 2021), Derek Jones, London 2017 (Jones, 2021) and Fatma Korkut, Ankara 2019 (Börekçi, Korkut, & Koçyıldırım, 2021) were invited to present their reflections on “the ways in which the conferences have contributed to the development of design education research.” Their reflections also are included in this conference proceedings.

During this session, the early career researchers who have organised the Futures of Design Education track shared their insights with the conference delegates. Lilyana Yazirlioğlu, one of the members, said that:

...with the conference, I had a chance to discover what is going on in the backstage of preparing an international conference from selection of themes to reviewing papers and preparing the online

conference setting which I found quite informative for a recent graduate student and an early career researcher like me. Especially, having discussions with other track chairs to enhance the themes in the early stages of the conference creation process was inspiring since it offered our team a sense of belonging to a bigger and supportive design community.

Lilyana's team member Yashar Kardar said that for him:

...this was a great experience! Being part of the conference enabled me to meet and learn from researchers from almost all over the world, and work closely and learn from experienced, passionate, and encouraging people such as Erik Bohemia, Derek Jones, and Naz Börekçi. This created an exceptional chance get an insight into the general state of design education research and the global dynamics influencing its development. It also personally has given me the courage to want to contribute to the design research community at a much larger scale. I think activities that would include young researchers such as myself, and members of my team build an incredible opportunity to empower young researchers from all over the world. We think that the mixing of scholarly discussions at a high level and social interaction is at the core for making these conferences attractive and important.

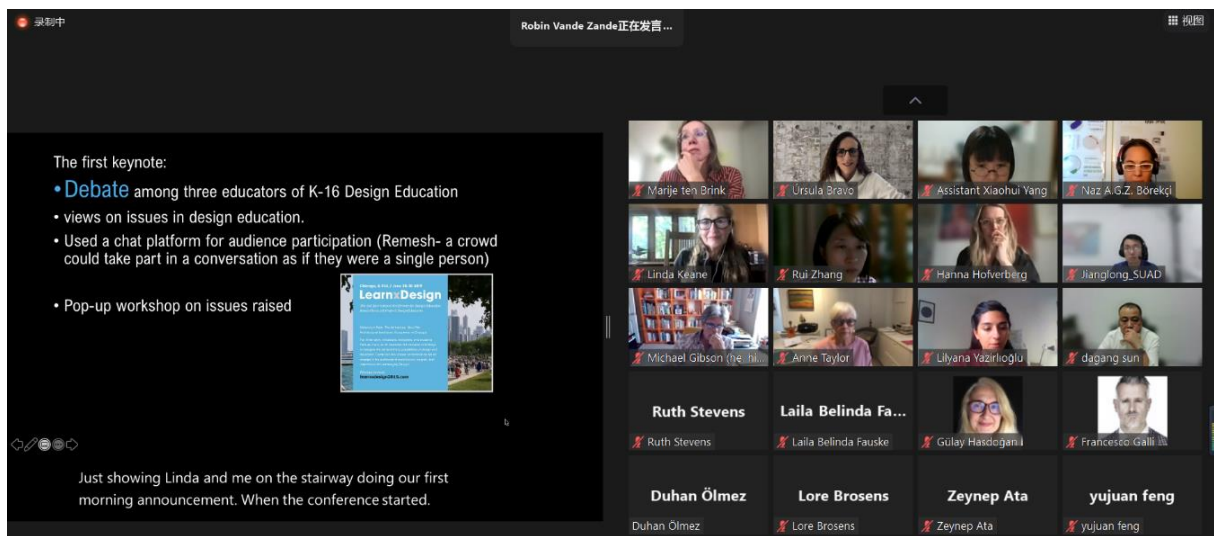


Figure 29. Robin Vande Zande reflected on the 2015 LxD conference which was hosted in Chicago.

The farewell speech for the conference was given by Professor Xin Li (see Figure 30), Vice President of SUAD, after which, the conference was closed by Professor Liv Merete Nielsen (see Figure 31).



Figure 30. Professor Xin Li, Vice President of SUAD who closed the conference with her farewell speech

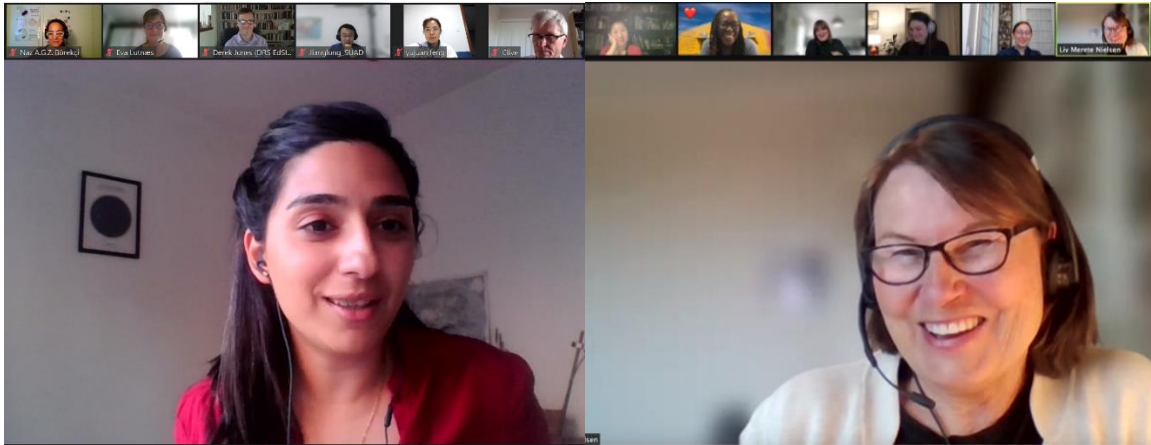


Figure 31. On the left, Lilyana Yazirlioğlu reflecting her and her team members' experience of organising a conference track, and on the right, Liv Merete Nielsen is summarising the event.

Social Programme: Conveying the Significance of Chinese Culture

It was believed that the conference programme would be enriched with social events, both for the conveying of the significance and richness of Chinese culture, and for providing an attractive and embracing medium for the delegates to come together. Various social gatherings were planned for the 15-minute and 30-minute breaks between the sessions, throughout the three conference days. These gatherings included relaxing exercise sessions, where Master Ms. Feng Yujuan demonstrated traditional stretching exercise, the Baduanjin; the audition of traditional Chinese music, and unmoderated chat rooms designated for tea breaks.

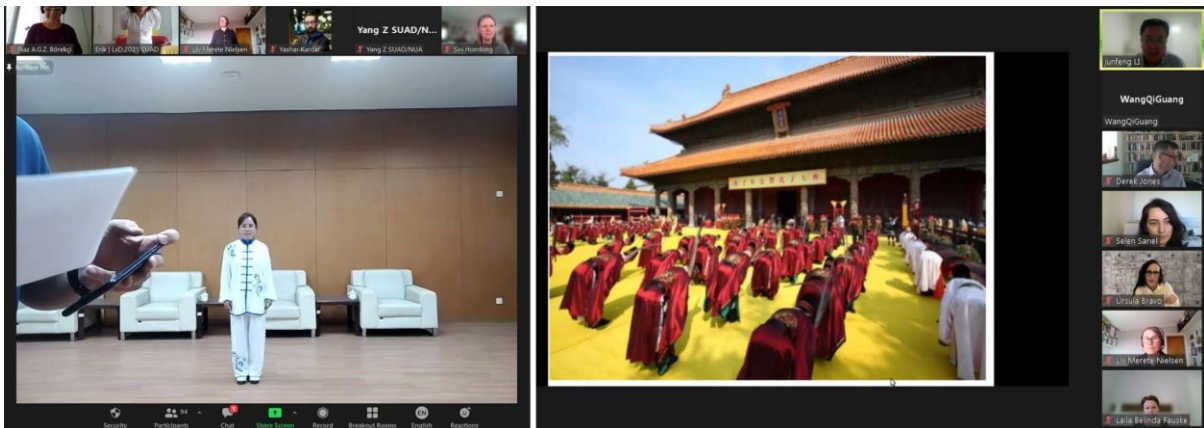


Figure 32. Left: Master Ms. Feng Yujuan beginning her exercise session, 26 September 2021. Right: Professor Junfeng Li presenting on Confucius, 26 September 2021.

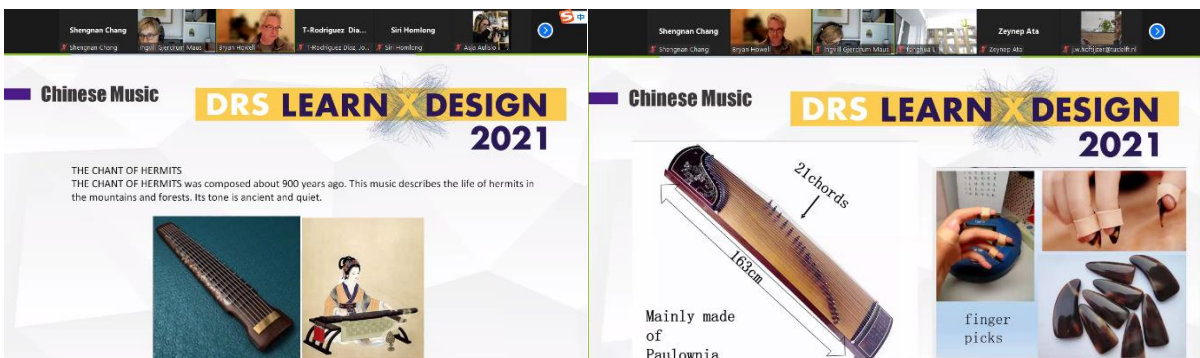


Figure 33. The conference delegates were able to relax during the breaks listening to examples of Chinese music.

A tea ceremony demonstration took place by Tea Master Ms. Yumei Yang. The Chinese people, in their drinking of tea, place much significance on the act of “savouring”. “Savouring tea” is not only a way to discern good tea from mediocre tea, but also how people take delight in their reverie and in tea-drinking itself. Snatching a bit of leisure from a busy schedule, making a kettle of strong tea, securing a serene space, and serving and drinking tea by yourself can help banish fatigue and frustration, improve your thinking ability, and inspire you with enthusiasm. You may also imbibe it slowly in small sips to appreciate the subtle allure of tea-drinking, until your spirits soar up and up into a sublime aesthetic realm. Buildings, gardens, ornaments and tea sets are the elements that form the ambience for savouring tea. A tranquil, refreshing, comfortable and neat locale is certainly desirable for drinking tea. Chinese gardens are well known in the world and beautiful Chinese landscapes are too numerous to count.



Figure 34. Tea Ceremony by Tea Master Ms. Yumei Yang.

The Chinese zodiac signs, and the designs that were prepared by Chinese students for the conference were presented in two break sessions. As in the Western cultures, traditional China has 12 Chinese zodiacs. However, these traditional Chinese zodiac signs are arranged in a 12-year cycle used for dating the years. They represent a cyclical concept of time, rather than the linear concept of time. The Chinese lunar calendar is based on the cycles of the moon and is constructed in a different fashion than the solar calendar. Every year is assigned an animal sign according to a repeating cycle from Rat to Pig. These traditional Chinese zodiacs are: the rat, ox, tiger, rabbit, Chinese dragon, snake, horse, sheep, monkey, rooster, dog and pig (see Figure 34).

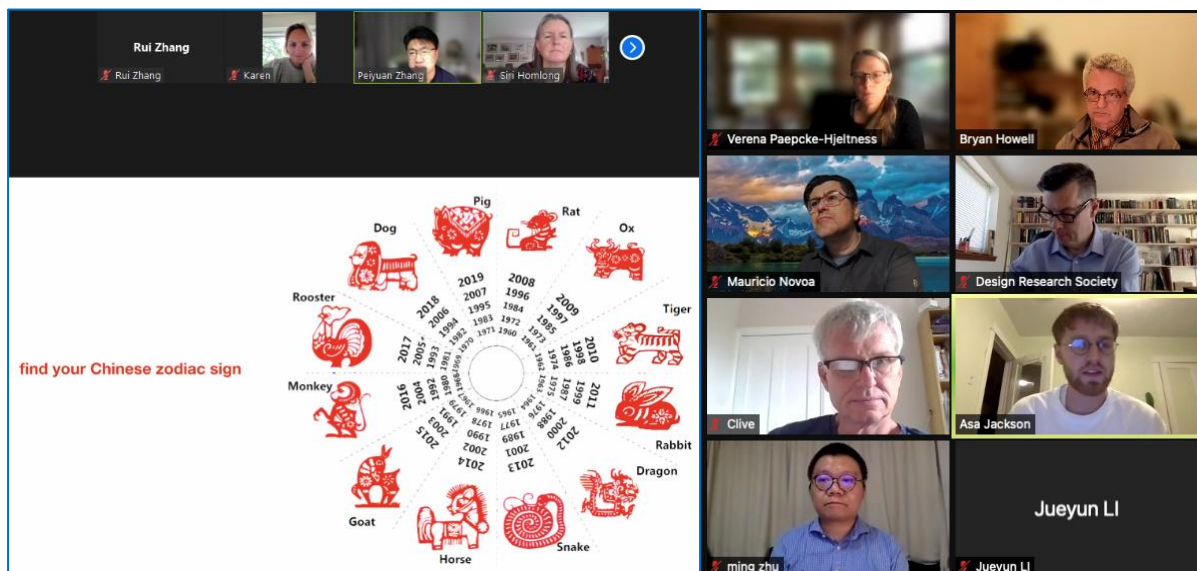


Figure 35. Chinese Zodiac session.

Design education in China was introduced in three break sessions, by Professors: Sun Lei from SUAD; Zhao Chao from Academy of Arts & Design, Tsinghua University; and Zhao Quanquan from Nanjing University of the Arts; describing to the audience how design education is organised at these three top ranking Chinese universities. This was also an opportunity for the conference delegates to meet with scholars from the design

programmes in China.

The SUAD museum, composed of Sun Changlin Art Museum and Oriental Chinese Crafts Museum was presented to the audience in two break sessions. The museum's collection consists of ancient and modern ceramics and stone Buddha statues, traditional folk life utensils, toys, Chinese New Year pictures, embroideries and many more artefacts.



Figure 36. Entrance to the Museum of Folk Arts.



Figure 37. The Museum of Folk Arts.



Figure 38. Introduction to Confucius' Philosophy presented by Professor Junfeng Li.

On the final day of the conference, a presentation was given in the main break session by Professor Junfeng Li titled *Introduction to Confucius' Philosophy*. Confucius is famous for his philosophy because he made many wise sayings in ancient China that helped many people learn about nature, the world, and human behaviour.

All presentations were simultaneously interpreted for the international audience.

The Proceedings

The Learn X Design 2021 conference proceedings have been assembled into 4 volumes. Altogether, there are over 1000 pages of material.

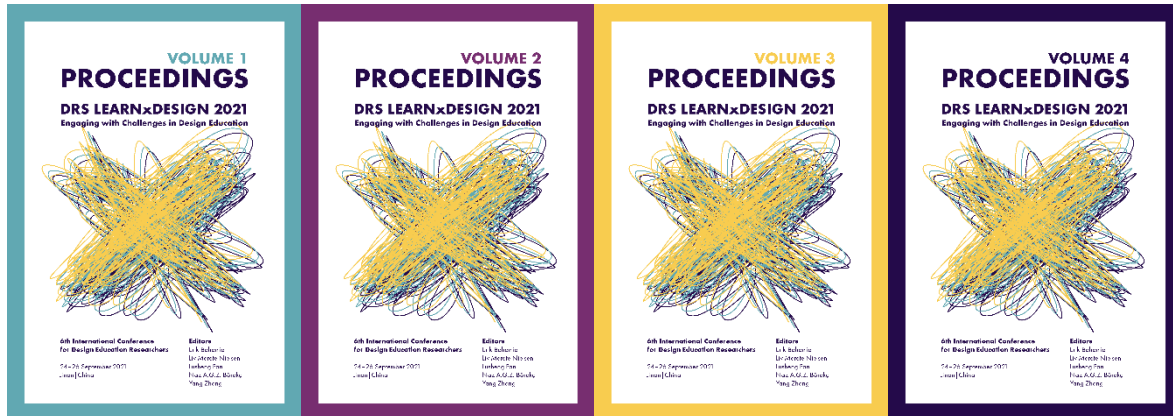


Figure 39. Each of the four volumes' cover pages was allocated one of the conference colours.

The proceedings from each conference reflect how topics have been given priority. Some years the conferences have been further developed and published in special issues of scientific journals. Also, after this conference such special issues will be conducted.

DRS Learn X Design 2021 Community

The conference registration never went on sale as it was fully subscribed, if only the authors and their co-authors of accepted submissions would attend the event. The participation was strictly by invitation only. The invited participants were the authors and their co-authors, the international and the local organising committee members, the track chairs, and co-chairs, 10 bursary holders, and selected scholars based in China.

CALL FOR BURSARY AWARDS FOR EARLY CAREER RESEARCHERS FROM THE GLOBAL SOUTH

LEARN X DESIGN Deadline: 20th April 2021

learnxdesign.net/lxd2021

Engaging with Challenges in Design Education
6th International Conference for Design Education Researchers

Figure 40. Call for Bursary submissions (source: Katja Thoring)

Participants from 28 countries have registered. Over 500 people have actively contributed to a variety of roles such as expert peer reviewers (see the list on page ii), authors (see the Index of Authors on page 1077 in the Volume 4), track chairs and co-chairs (see the list on page i), the local planning and organising committees and assistants (see the list on page iv).

Acknowledgment and Special Thanks

As we conclude this editorial, we would like to thank the Shandong University of Art & Design for generously hosting the DRS Learn X Design 2021: 6th International Conference for Design Education Researchers. We would like to thank you to the SUAD Council's for taking the steps to enable diverse scholars from all around of the world to contribute advancing the field Design Education Research by lowering the barriers and to enable participation of scholars from marginalised communities by kindly offering to cover the registration cost for the Track Chairs/co-chairs and Authors/co-authors of accepted submissions, keynotes and those awarded SUAD President's bursaries to attend the conference.

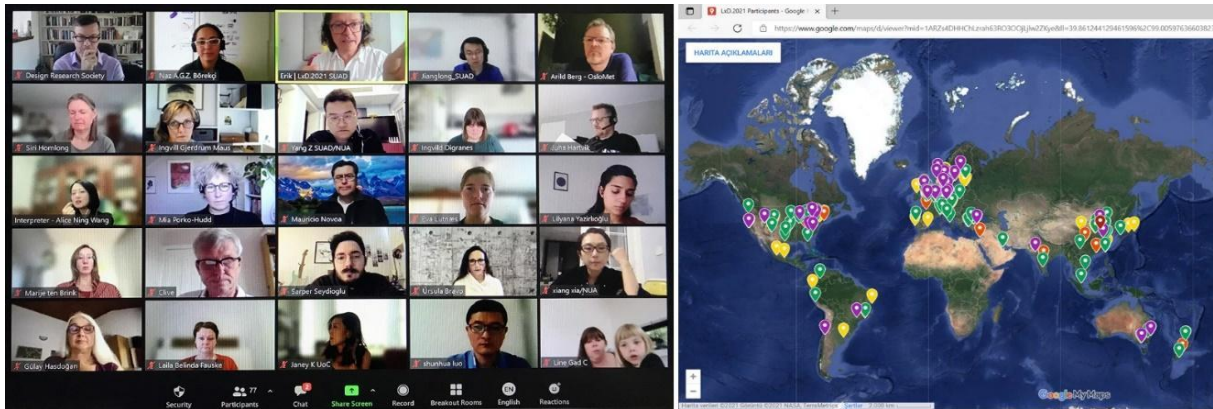


Figure 41. Left: A moment in the conference on Zoom, 26 September 2021. Right: Distribution of the LXD 2021 community across the world, Google My Maps.
<https://www.google.com/maps/d/u/0/edit?mid=1ARZs4DHHChLzrah63RO30OjLjw2ZKye&usp=sharing>

We also thank the Design Research Society Special Interest Group in Design Education, DRS EdSIG, for giving us the opportunity and trust to organise it. We would like to thank the General Conference International Planning Committee, International Academic Organising Committee, Patrons of the Conference, International Scientific Programme Committee, and International Scientific Panel for their contribution. We would also like to thank the following institutions that have provided their kind support in the realization of the conference: Design Literacy International Network, Hochschule Anhalt, Hochschule für Wirtschaft und Recht Berlin, Middle East Technical University, Oslo Metropolitan University, The Open University (UK), Tulane University, Universidad del Desarrollo and Åbo Akademi University.

We felt the power of the community with this conference, however online, and found it to be a good opportunity for the community to expand itself in numbers, as well as in knowledge and mindsets. We hope that it has been a fulfilling conference experience for its participants also. We thank the DRS Learn X Design 2021 community for contributing to the conference and taking an active part in its realisation. It is not yet decided who will host the 7th DRS Learn X Design conference in 2023. In line with the previous conferences, we will be very happy to support those who will contribute to the continuity of design education research. Endings for events are never easy, especially when there is a lot of time and commitment involved. Nevertheless, we consider endings to be new beginnings. We will now begin a new decade for the DRS Learn X Design conference series and look forward to meeting with the design education researchers community in 2023.

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