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Stereoscopic Displays and Applications Conference XXXVII - Introduction

Andrew J. Woods[1], Takashi Kawai[2], Bjorn Sommer[3], Nicolas S. Holliman[4]
[1]Curtin University, Australia; [2]Waseda University, Japan; [3]Royal College of Art, United Kingdom; [4]Independent Researcher, Australia.

Abstract

This paper provides a summary of the 37th annual Stereoscopic Displays and Applications (SD&A) conference held in March 2026, and also introduces the SD&A 2026 conference proceedings.

Introduction

Stereoscopic Displays and Applications XXXVII (the 37th annual conference) was held in March 2026 as part of the 38th annual Electronic Imaging (EI) Symposium at the Hyatt Regency San Francisco Airport Hotel in Burlingame, California.

The 2026 EI Symposium was held over the period Sunday 1 March to Thursday 6 March 2026. The SD&A conference was held in cooperation with the Engineering Reality of Virtual Reality (ERVR) 2026 conference to provide three continuous days of 3D-related topics from Monday 2 March through to Wednesday 4 March 2026.

The final program of the 2026 SD&A conference is published on the SD&A conference website:

www.stereoscopic.org/2026

The program page lists which presentations have a published manuscript or journal article. All manuscripts from the EI symposium (including SD&A and ERVR) are published open-access via the IS&T Digital Library and are all open access which significantly increases the visibility of these papers:

https://library.imaging.org/ei

First Day

The first day of this year's SD&A conference started with a joint session with the Human Vision and Electronic Imaging (HVEI) conference on the topic of Augmented and Mixed Reality.

The session was chaired by Alex Chapiro (Meta, United States) and had the following papers:

- "**HVEI Keynote: How human vision science shapes future displays**" Qi Sun, NYU [HVEI-207]
- "**Enhancing digital rear-view mirrors in trucks using overlayed graphics**" Kjell Brunnström, RISE Research Insitute of Sweden [HVEI-208] [1]
- "**The impact of foveated rendering on motion parallax: A perceptual model of depth sensitivity across the visual field**", Sophie Kergaβner, Università della Svizzera italiana [HVEI-209] [2]

The morning continued with the Electronic Imaging Symposium Highlights Session which provides short samples of selected papers across all of the conferences at EI.

The Electronic Imaging Welcome Lunch provided a time for all Electronic Imaging Symposium attendees to come together over a nice meal in The Grove – the large internal atrium of the symposium hotel.

After lunch the first Electronic Imaging Plenary was held: "Trust and Truth in the Age of Deepfakes" by Professor Hany Farid, University of California, Berkeley (Figure 1). Hany's presentation provided an unsettling view of the future of imaging where it is very hard to distinguish between a real image and a fake image produced using generative AI.

Figure 1. *EI 2026 Symposium Chair Robin Jenkin introduces EI Plenary speaker Professor Hany Farid. Photo: Andrew Woods.*

The first led session of the 2026 SD&A conference was focused on "Stereoscopic Displays" and was opened by Takashi Kawai who welcomed attendees to the conference and provided an overview of the days ahead (Figure 2).

Figure 2. *SD&A co-chair Takashi Kawai opens the 2026 SD&A conference – including special instructions on how to do a Tim Tam Slam during the coffee breaks. Photo: Andrew Woods.*

This session had the following technical presentations:

- "**Hybrid scan multiviewer true perspective autostereo display**" Steen Svendstorp Iversen, Realfiction ApS [SDA-332]
- "**Implementation of pseudo-convergence angle in eye tracking for CG-based lenticular naked-eye 3D displays**" Yoshihiro Sato, Tokyo City University [SDA-333] [3]

This year's SD&A Keynote presentation was delivered by Michelle Cortese, Design Director, Input & Interaction at Meta (Reality Labs); and Adjunct Professor, XR Design at NYU (Interactive Telecommunications Program) (see Figures 3 and 4). The session was held jointly with the ERVR conference. Michelle's presentation was titled "Embodying the Machine: Strategies and Frameworks for Ethical XR". Michelle's presentation emphasized that effective XR practice requires attention to human impact as well as technical skill. She discussed using the Hedonomic Pyramid to guide the creation of safe, functional, usable and pleasurable immersive systems. In this context the Hedonomic Pyramid is a hierarchical design framework that organizes experience design priorities into levels.

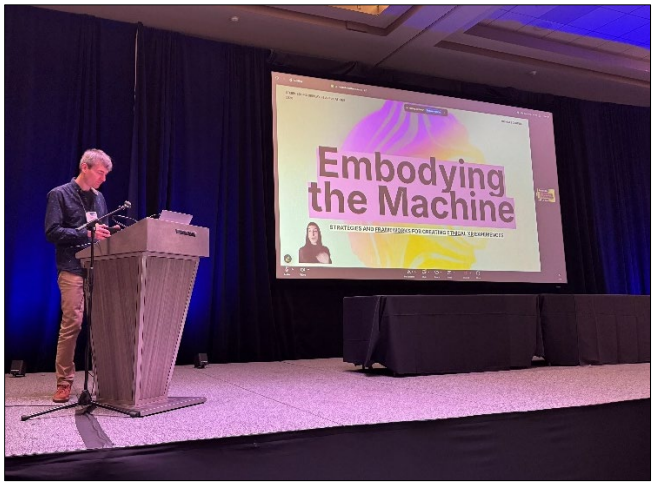

Figure 3. *SD&A 2026 co-chair Bjorn Sommer introduces SD&A Keynote speaker Michelle Cortese. Photo: Andrew Woods.*

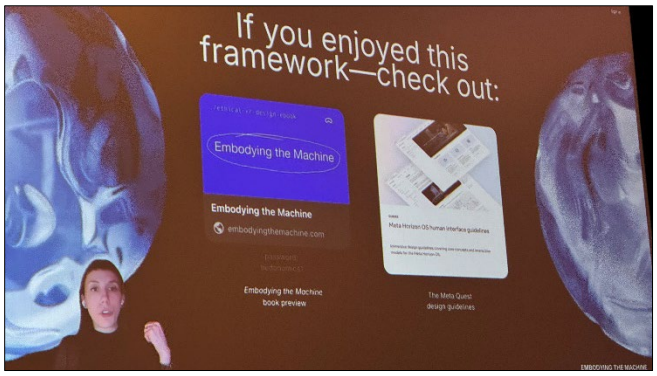

Figure 4. *Michelle Cortese delivering her SD&A keynote in cooperation with the ERVR conference.*

SD&A 3D Theater

On Monday evening the SD&A conference held its annual 3D Theater session (Figure 5). A huge selection of forty-one 3D films (shorts or segments) were screened as part of the session. This annual event showcases the wide variety of stereoscopic 3D content that is being produced and exhibited around the world, from major studios, to small companies, to researchers, and talented individuals.

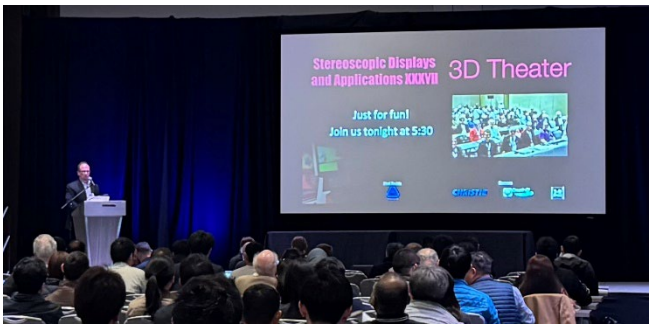

Figure 5. *IS&T Executive Director Jonathan Phillips helped promote the 3D Theater session to symposium attendees before the EI Plenary. Photo: Andrew Woods.*

This year we widened the range of stereoscopic content on show during the session with an expanded selection of VR180 3D content, and for the first time the 3D Theater session included a selection of stereoscopic 3D games content - more on this later.

The full list of the 3D content shown during the SD&A 3D Theater session is as follows:

Competition Category

1. ***3D Movie Dance Party*** from Martin Schub (USA)
2. ***AI Motion Reel*** from Roxanne Ducharme aka Trashcanroxanne; stereoscopic conversion by Andrew Murchie, EYEPOP-3D (Canada / UK)
3. ***Anubis The Ride - Plopsaland De Panne*** from ThemePark360 (Germany); reframed from VR180
4. ***Behind the Shot - Mount Teurafaatiu*** from Explore POV | Explore Immersive (New Zealand); reframed from VR180
5. ***Cavernous*** from William Turner (USA)
6. ***De Piratenboot - Plopsaland De Panne*** from ThemePark360 (Germany); reframed from VR180
7. ***Dreams*** from Martin Schub (USA)
8. ***Explore POV Best Bits*** from Explore POV | Explore Immersive (New Zealand); reframed from VR180
9. **Flight of the Sugar Plum Fairies / Tiny Dancer** from Bob Venezia (USA)
10. ***Immersive Nature*** from Haotian Luo, Curtin University; Supervisors: Rachel Sheffield, Craig Sims, Michael Ovens (Australia); reframed from VR180
11. ***In Stereo*** from Jonathan Sabin / Variety Films (USA)
12. ***Infernal Combustion*** from Peter Rose (USA)
13. **Metro Paris** (a tribute to Karel Bata's Mind the Gap) from Fabien Remblier (France)
14. ***Moot Court*** from Zo Carlsson, Curtin University; Supervisors: Michael Dizon, Michael Ovens (Australia); reframed from VR180
15. ***Neon Juggler*** from Andrey Anokhin (Russia)

16. ***Ringing*** from Alaric Hamacher (Republic of Korea)
17. ***SHAED - Once Upon a Time*** from Keeley Turner and Hugh Hou (USA); reframed from VR180
18. ***Stahlstichsymphonie*** from Christian A. Zschammer (Germany)
19. ***The Gates*** from D. Carlton Bright (USA)

Demonstration-only films

20. ***Apollo 11: 3-D Photo Moon Tour*** from Martin Hans Schmitt (Germany)
21. ***Avatar: Fire and Ash*** trailer from Lightstorm Entertainment, Inc. (USA)
22. ***Avengers: Doomsday*** teasers from Marvel Studios (USA)
23. ***Billie Eilish: Hit Me Hard and Soft*** trailer from Lightstorm Entertainment, Inc. (USA)
24. ***Dans la Tête De Godard et De Beauregard*** from Hind R. Boukli (France)
25. ***Hoppers*** trailer from Pixar Animation Studios (USA)
26. ***Minions & Monsters*** trailer from Illumination Entertainment (USA)
27. ***Send Help*** trailer from 20th Century Studios (USA)
28. ***Super Mario Brothers Galaxy*** trailer from Illumination Entertainment (USA)
29. ***The Cook*** (1918) from Paramount Pictures with 3D conversion by Andrew Murchie, EYEPOP-3D (USA / UK)
30. ***Toy Story 5*** trailer from Pixar Animation Studios (USA)

3D Games Category

31. ***Zaxxon 3D*** (1987) from Sega (Japan) for Sega Master System plus SegaScope 3-D glasses; played by MadMatty; sourced from World of Longplays.
32. ***Space Harrier 3D*** (1988) from Sega (Japan) for Sega Master System plus SegaScope 3-D glasses; played by MadMatty; sourced from World of Longplays.
33. ***Line of Fire*** (1988) from Sega (Japan) for Sega Master System plus SegaScope 3-D glasses; played by MadMatty; sourced from World of Longplays.
34. ***Wario Land*** (1995) from Nintendo (Japan) for Nintendo Virtual Boy; played by T-0815; sourced from World of Longplays.
35. ***Panic Bomber*** (1995) from Nintendo (Japan) for Nintendo Virtual Boy; played by Schlauchi; sourced from World of Longplays.
36. ***Mario's Tennis*** (1995) from Nintendo (Japan) for Nintendo Virtual Boy; played by Schlauchi; sourced from World of Longplays.
37. ***Avatar: The Game*** (2009) from Ubisoft (Canada) for PlayStation 3; played by RXQ79
38. ***Uncharted 3: Drake's Deception*** (2011) from Sony Computer Entertainment (USA) for Playstation 3; played by RXQ79
39. ***The Adventures of Tintin: The Secret of the Unicorn*** (2011) from Ubisoft (France) for Nintendo 3DS; played by Andrew
40. ***Super Mario 3D Land*** (2011) from Nintendo (Japan) for Nintendo 3DS; played by Andrew
41. ***3D Sonic the Hedgehog*** (2013) from Nintendo (Japan) for Nintendo 3DS; played by MadMatty

The 3D Theater session included a competition for best film in each of two categories: Animation and Live-Action. The event featured a selection of Hollywood studio films and other special content, which was shown out-of-competition for demonstration only.

The judges at this year's 3D Theater session were:

- Jonathan Phillips, Executive Director, IS&T;
- Eleanor O'Keefe, KBR; and
- Nicholas Routhier, CubicSpace Technologies, Inc.

Our judges carefully selected the following winners:

- "**In Stereo**" from Jonathan Sabin – Best of Show Animation (Figure 6), and
- "***Flight of the Sugar Plum Fairies / Tiny Dancer***" from Bob Venezia – Best of Show Live-Action (Figure 7).

Figure 6. *Still frame from "In Stereo" by Jonathan Sabin – Best of Show Animation Category.*

Figure 7. *Still frames from the pair "Flight of the Sugar Plum Fairies / Tiny Dancer" from Bob Venezia – Best of Show Live-Action Category.*

The producers of this year's SD&A 3D Theater session were: Eric Kurland, 3-D SPACE (host); John Stern, retired; and Andrew Woods, Curtin University.

We wish to thank all the contributors who graciously allowed their 3D content to be screened at this year's event.

We are also grateful for the support of our 3D Theater session sponsors: Christie Digital Systems, DepthQ Stereoscopic by Lightspeed Design Inc, and 3-D SPACE. More on this later in the discussion section.

After the 3D Theater a group of SD&A attendees made their way to Max's of Burlingame restaurant for the annual SD&A dinner.

VR180 Content in the 3D Theater Session

VR180 content is ordinarily filmed for screening on VR head-mounted displays, but it can also be screened on half-dome screens such as planetariums. VR180 content is usually stereoscopic because capturing 3D content with two forward facing fisheye lenses is relatively easy and importantly there are many cameras that support this functionality including the Canon R5C with its matching Dual Fisheye lens for 4K per eye capture, the Blackmagic URSA Cine Immersive for 8K per eye capture, and many others.

For the purposes of the 3D Theater session all of the VR180 3D films were reframed into 16:9 3D format using either Vegas Pro 16 or Davinci Resolve Studio. (Note that Vegas Pro dropped stereoscopic 3D functionality from version 23 onwards. Many users that require stereoscopic video editing capability are now moving to Davinci Resolve Studio which offers native stereoscopic video editing support.) The VR180 3D content is reframed into 16:9 format by importing the equirectangular 3D footage into the timeline and cropping the footage to a 16:9 window. Depending upon the extent of the 16:9 window the resultant footage can have a distorted look because content with a wide 180° field-of-view is being displayed on the 3D Theater screen which has a narrower field-of-view, but the reframed content still provides attendees with a good understanding of the content – they will just need to "imagine" the immersive aspect that would be experienced if viewed on a HMD or a Dome screen.

Some of the content in this year's session was filmed with the Blackmagic URSA Cine Immersive camera for viewing on the Apple Vision Pro which provides near 4K per eye resolution. The 8K native resolution per eye of the Blackmagic URSA Cine Immersive camera provides plenty of high-resolution stereoscopic detail to appreciate in the reframed format.

3D Games Content in the 3D Theater Session

As mentioned earlier, this was the first time that stereoscopic clips from 3D video games have been included in the SD&A 3D Theater session, which is perhaps surprising given than the video games industry is bigger than the "Hollywood" movie industry. This session included snippets from a selection of 11 different stereoscopic 3D games from four different platforms.

The **Sega Master System** was released in the USA in 1986, and the SegaScope 3D glasses were released in 1987 [4]. A total eight 3D games were released for this system [5] and three games were shown in the session.

The **Nintendo Virtual Boy** (Figure 8) was released in 1995 [6] and a total of 19 games were released for the system [7]. Also of note is that just one month before this SD&A (February 2026), Nintendo released a Virtual Boy attachment for the Nintendo Switch allowing users to play original Virtual Boy Games in stereoscopic 3D using a modern console – giving new life to a 31-year old platform. We showed snippets of three Virtual Boy games this night.

Figure 8. *Stereo-pair of the original Nintendo Virtual Boy (cross-view format). Photo: Andrew Woods using an iPhone 15 Pro in Spatial Photo mode.*

The **Sony Playstation 3** was released in Japan in 2006 and it was the first gaming console to include a HDMI port. The 3D capability was added in 2010 via a software update and would work with all modern 3D TVs available at that time supporting the HDMI 3D standard [8]. Over 100 stereoscopic 3D games have been released for the Playstation 3 [9] and two game snippets from the Playstation 3 were shown in this session.

The **Nintendo 3DS** (Figure 9) was released in 2011 and was an active product through to 2020 [10]. There was a total of 1807 games released for the 3DS platform [11], and three were shown this night.

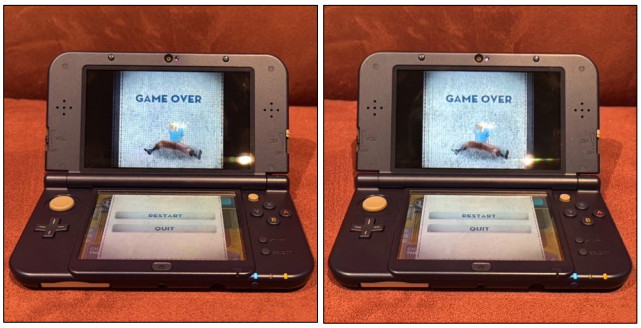

Figure 9. *Stereo-pair of the New Nintendo 3DS XL running "The Adventures of Tintin: The Secret of the Unicorn" (cross-view format). Photo: Andrew Woods using an iPhone 15 Pro in Spatial Photo mode.*

After the session, several people asked how the 3D content was obtained for the session. Sega Master System and Nintendo Virtual Boy content was captured using emulation and kindly provided by World of Longplays with thanks to Gerhard Weihrauch [12]. PS3 content was captured using a HDMI recorder and kindly provided by RXQ79. 3DS content was captured using a Nintendo 3DS Video Capture Board installed inside a new 3DS XL console [13].

There are many platforms and games that we have not touched on in this session. Let us know if you'd like to see more next year.

Second Day

The second day of SD&A (Tuesday 3rd March) had technical sessions on “Human Factors”, “Capture and Playback”, “AI & XR for Education”, “Marine Applications” and “Business Innovation”, plus the second EI Plenary, and the EI demonstration session.

The first technical session of the day was “Human Factors” chaired by Andrew Woods (Curtin University, Australia). A funny thing happened on the way to this session – the first two speakers became stuck in the hotel’s elevator. It crossed our minds whether we would need to video conference the two speakers into the conference room to delivery their presentations virtually from the hotel elevator, which would have provided a rather amusing solution to the problem, but fortunately the elevator released them in time for them to give their presentations in-person. Once we overcame that bit of excitement, the session had the following presentations:

- “**Oculomotor behavior in response to vergence-accommodation conflict**” Eric Seemiller, KBR, Inc. [SDA-334] [14]
- “**The effects of vertical misalignment in a stereoscopic display during a long-haul aerial refueling simulation**” Eleanor O'Keefe, KBR [SDA-335] [15]
- “**Virtual reality and anhedonia: Exploring reward processing and emotional numbing**” Dan Benedict, Colorado State University [SDA-336]
- “**Basic characteristics of body-visual interaction in mixed reality environments**” Yusuke Ohira, Kazuki Deguchi, Yoshihiro Banchi, Takashi Kawai, Wasada University [SDA-337] (Figure 10)
- “**Case Study – two VR180 3D student internships – Immersive Nature and Moot Court**” Andrew Woods, Craig Sims, Rachel Sheffield, Michael Dizon, Haotian Luo, Zo Carlsson, Michael Ovens, Curtin University [SDA-356] [16]
- “**Albany Then & Now: matching stereo-views from 1858 with the modern day**” Andrew Woods, Tomas Szabo, Curtin University [SDA-357] [17]

Figure 10. *Yusuke Ohira presents his paper on body-visual interaction in mixed reality environments. Photo: Andrew Woods.*

The “Capture and Playback” session was chaired by Takashi Kawai (Waseda University, Japan) and had two presentations:

- “**Adaptive video playback: Extending the CubicSpace model to video**” Nicholas Routhier, Cubic Space [SDA-338] (see Figure 11)
- “**Aerial-imaging light-field camera with wide-viewing angle for real-time 3D imaging**” Kotaro Sakamoto, Shoma Kono, Masanori Morimoto, Masahiro Kawakita Osaka Institute of Technology [SDA-339] [18]

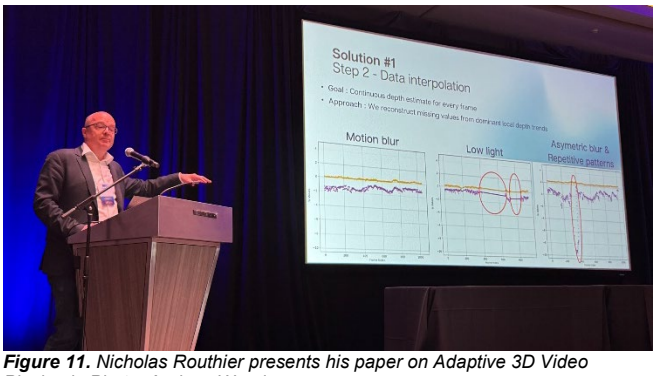

Figure 11. *Nicholas Routhier presents his paper on Adaptive 3D Video Playback. Photo: Andrew Woods.*

The “AI & XR for Education” session was chaired by Bjorn Sommer (Royal College of Art, United Kingdom) and had three presentations:

- “**Virtual reality in engineering education: A survey of applications, trends, and challenges**” Rojin Manouchehri, Sergiu Dascalu, University of Nevada, Reno [SDA-340] (see Figure 12)
- “**MAIVE: A multi-agent AI-driven immersive virtual reality environment for astronomy education**” Francia Fuentes Riesco, Colorado State University [SDA-341] (see Figure 13)
- “**A comparative study on memory strategy adaptation in XR vocabulary learning**”, Nicko Caluya, Ritsumeikan University [SDA-342] [19]

Figure 12. *Rojin Manouchehri presents her paper on Virtual Reality in Engineering Education. Photo: Andrew Woods.*

Figure 13. *Francia Fuentes Riesco presents her paper on using Virtual Reality for Astronomy Education. Photo: Andrew Woods.*

After lunch, the second EI plenary presentation titled "The Drunk at the MicroLED Lamppost" was delivered by Nikhil Balram, CEO, Mojo Vision. The presentation discussed microLED displays and some demo units were displayed at the end of the presentation (see Figure 14).

Figure 14. *Andrew Woods views one of the MicroLED demonstration displays from Mojo Vision after the EI Plenary talk by Nikhil Balram. Image in Anaglyph 3D (red left, cyan right format). Photo: Eric Kurland.*

The fifth technical session of the SD&A conference, titled "Marine Applications", was chaired by Nicholas Routhier (CubicSpace Technologies, Canada) and had the following presentations:

- "**Trans-oceanic stereoscopic experimentation: Co-visualizing quantitative & qualitative ocean data to reveal climate change tipping points on & above the ocean**" Bjorn Sommer, Royal College of Art [SDA-343]
- "**Virtual reality for environmental sustainability: Case cruise entertainment**" Eero Nirhamo, University of Turku [SDA-344]

The sixth technical session of the SD&A conference, titled "Business Innovation", was chaired by Eleanor O'Keefe (KBR, United States) and had the following presentations:

- "**The road to CubicScreen**" Nicholas Routhier, Cubic Space [SDA-345]
- "**Future virtual conferencing: From web-based technologies to extended reality**" Bjorn Sommer, Royal College of Art [SDA-346] [20]

This was the final dedicated session of the SD&A conference for 2026. All subsequent SD&A sessions were joint with the Engineering Reality of Virtual Reality (ERVR) conference.

Demonstration Session

The annual Electronic Imaging Symposium-wide Demonstration Session was held on the Tuesday evening. This year's session again had a wide selection of stereoscopic and VR-related technologies on display:

- Yusuke Ohira, Waseda University "Basic characteristics of body-visual interaction in mixed reality environments" [SDA-337] (See Figure 15)
- Yoshihiro Banchi, Waseda University "Sublime VR: The influence of auditory presentation" [ERVR-194] (see Figure 16 left)
- Bjorn Sommer, Royal College of Art "Scientific Java 3D applications in VR headsets: A case study using CELLmicrocosmos software" [ERVR-184] (see Figure 16 right)
- Nicholas Routhier, CubicSpace Technologies "The Road to CubicScreen" [SDA-345] (see Figures 17 and 18)
- Eric Kurland, 3-D SPACE (see Figure 19)
- Andrew Woods, Curtin University HIVE "Albany Then & Now: matching stereo-views from 1858 with the modern day" [SDA-357] (see Figure 20)

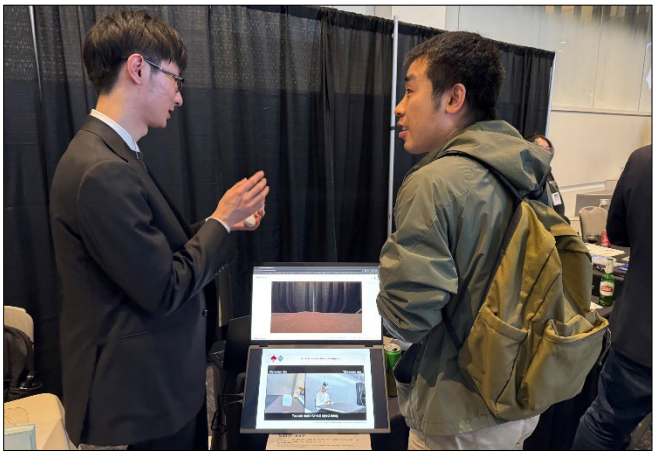

Figure 15. *Yusuke Ohira demonstrated a Quest 3 VR HMD running his body-visual interaction experiment. Photo: Andrew Woods.*

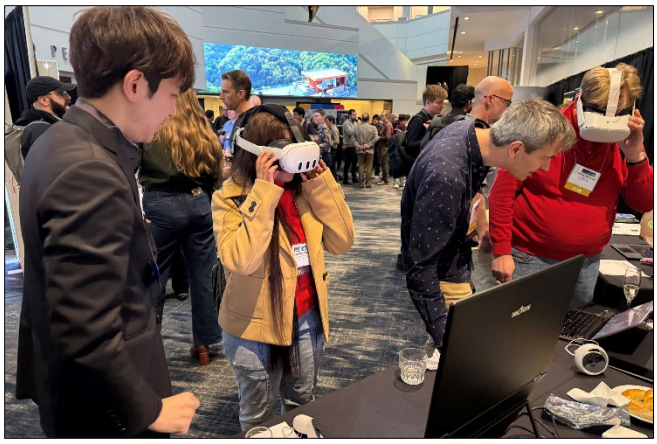

Figure 16. *Yoshihiro Banchi (left) used a Quest 3 VR HMD to demonstrate his "Sublime VR" experience designed to evoke "awe" in the participants, and Bjorn Sommer (second from right) used a Quest 2 VR HMD to demonstrate the CELLmicrocosmos software. Photo: Andrew Woods.*

Figure 17. *Nicholas Routhier demonstrates the CubicScreen to Eleanor O'Keefe. The CubicScreen is an attachment that allows spatial photos and videos to be seen in a glasses-free 3D format on select iPhone models. Photo: Andrew Woods.*

Figure 18. *Nicholas Routhier uses a Quest 3 HMD to demonstrate the CubicSpace Stereocard viewer to Andrew Woods (seated). Photo: Eleanor O'Keefe.*

Figure 19. *Eric Kurland (left) with Sergiu Dascalu at the 3-D SPACE booth showing a range of portable 3D displays. Photo: Andrew Woods.*

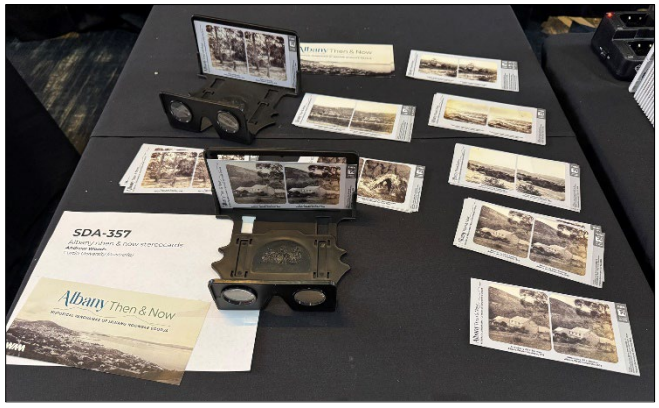

Figure 20. *Andrew Woods showed the selection of Stereocards developed for the "Albany Then & Now" exhibition utilizing OWL stereocard viewers from London Stereoscopic Company. Photo: Andrew Woods.*

Third Day

On the third day (Wednesday 4th March) there were three sessions of the Engineering Reality of Virtual Reality (ERVR) conference. These sessions were held jointly with the SD&A conference.

This year's ERVR conference was co-chaired by Sharad Sharma (University of North Texas, United States) (see Figure 21) and Bjorn Sommer (Royal College of Art, United Kingdom).

Figure 21. *Sharad Sharma opening the Engineering Reality of Virtual Reality conference. Photo: Andrew Woods.*

The first session of the ERVR conference was on "VR Frameworks and Tools" chaired by ERVR co-chair Sharad Sharma. The following presentations were delivered:

- "**Scientific Java 3D applications in VR headsets: A case study using CELLmicrocosmos software**" Bjorn Sommer, Royal College of Art [ERVR-184] [21]
- "**Bridging Unity VR experiment templates and institutional infrastructure**" Levi Scully, Vinh Le, Frederick Harris Jr., Sergiu Dascalu, University of Nevada, Reno [ERVR-185] [22] (see Figure 22)

Figure 22. *Vinh Le presents his paper on "Bridging Unity VR experiment templates and institutional infrastructure". Photo: Andrew Woods.*

The keynote presentation for this year's ERVR conference was titled "The Eureka VR Environment for Mining Engineering Education" delivered by Professor Sergiu Dascalu, University of Nevada. The presentation introduced the Eureka VR environment, an NSF-funded project designed to enhance mining engineering education. (see Figure 23)

Figure 23. *Professor Sergiu Descala presents his ERVR keynote presentation on the Eureka VR Environment. Photo: Andrew Woods.*

The second session of the day for ERVR was titled "AI & XR for Health Applications" and chaired by ERVR co-chair Bjorn Sommer. This session was also joint-sessioned with the SD&A conference. The following presentations were delivered:

- "**"Say bye for hi": XR mourning ritual with AI-powered avatar in the aftermath of a national tragedy**" Hae Jung Suk, VHEX Lab. Co., Ltd. [ERVR-187] [23]
- "**Virtual reality-based AI mental health companion: A multimodal system for therapy, mindfulness, and stress detection**" Sharad Sharma, University of North Texas [ERVR-188] [24]
- "**Virtual reality 3D puzzles for sustaining cognitive and motor skills in seniors**" Regina Kaplan-Rakowski, University of North Texas [ERVR-189]
- "**Simulating epidemic response and communication using AI-powered NPCs in virtual reality**" Faria Alam, University of North Texas [ERVR-190] [25]

This year the EI Symposium Poster Session was held during the lunch break on Wednesday. The symposium also provided a nice meal for attendees and presenters to enjoy while discussing the posters.

The third and final Plenary Presentation for this EI Symposium was titled "Vera C. Rubin Observatory and the Legacy Survey in Space and Time" and delivered by Dr. Andrew Rasmussen, SLAC National Accelerator Laboratory, Stanford University (see Figure 24). Andrew's presentation detailed the Vera C. Rubin Observatory which is an astronomical observatory located in Chile which features a 3.2-gigapixel camera - the largest ever built.

Figure 24. *Andrew Rasmussen delivers his EI Plenary Presentation on the Vera Rubin Observatory. Photo: Andrew Woods.*

The "Audio & Visuals in VR" session of the ERVR conference was chaired by Bjorn Sommer. The following presentations were delivered:

- "**KiCaT: Fast Visual Keystroke Tracking on Any Keyboard Image**" Lawrence Amadi, Andrew Lu, Chih-Hsien Chou, and Ning Lu, Futurewei Technologies [ERVR-191] [26]

- "**Actions can teach better than words**" Michael Wilson, Vinh Le, Sergiu Dascalu, Frederick Harris Jr., University of Nevada, Reno [ERVR-192] [27]
- "**Use of psychoacoustics for improved interaction and navigation capabilities in extended reality**" Rhoda Asamoah, Alex Renner, Kexin (Kate) Wang, Merate Barakat, Kimberly Zarecor, Eliot Winer, Iowa State University [ERVR-193] [28] (see Figure 25)
- "**Sublime VR: The influence of auditory presentation**" Yoshihiro Banchi, Waseda University [ERVR-194] [29]

Figure 25. *Rhoda Asamoah delivers her presentation on improving interaction and navigation in extended reality. Photo: Andrew Woods.*

This was the final session of the ERVR conference for this year. Manuscripts from this day's ERVR conference sessions will be published as part of the ERVR conference proceedings in the IS&T Digital Library [30].

Discussion

The organization of the Stereoscopic Displays and Applications conference, the Engineering Reality of Virtual Reality conference, the Electronic Imaging Symposium and other EI conferences involves a huge amount of effort across many people each year. We wish to thank all of the individuals and groups that contribute to the success of this meeting, including:

- conference authors and attendees.
- demonstration session presenters.
- the staff at the Society for Imaging Science and Technology (IS&T / Imaging.org): Jonathan Phillips, Marion Zoretich, Katrina Bird, and Donna Smith; plus Palisades Convention Management staff: Jenny Donelan, Mari Ramirez, and Bill Klein.
- the AV staff at the venue managed by Adrian Romero from Spectrum Audio Visual.
- Eric Kurland from 3-D SPACE for supporting SD&A and ERVR presenters' technical requirements and overseeing the 3D projection system at the conference.

We are extremely thankful to Christie Digital Systems (Cypress, California, United States) and Lightspeed Design Inc (Bellevue, Washington, United States) for supporting the conference with the loan of stereoscopic projection equipment for use during the SD&A 3D Theater session and the technical sessions of the SD&A and ERVR conferences. This year we had a very capable stereoscopic projection system which consisted of a Christie Boxer 304K projector with the Mirage upgrade for high-quality stereoscopic input (Figure 26), and a DepthQ Stereoscopic Modulator for passive 3D projection (Figure 27) on the 16:9 silvered screen along with a DepthQ server for media playback. The stereoscopic projection system was positioned on a platform at the back of the room (Figure 28) and the audience wore passive polarized 3D glasses to see the high-quality 3D visuals on screen. We extend a special word of thanks to Larry Paul, Chris Ward, and Dan Lawrence for personally assisting with the session.

Figure 26. *Christie Digital Systems Boxer 304K projector. Photo: Christie Digital Systems*

Figure 27. *DepthQ Polarization Modulator. Photo: Lightspeed Design Inc.*

The SD&A conference committee play an important role in supporting and shaping the conference each year. We very much appreciate the support of the committee in organizing the conference.

This year the SD&A conference committee were:

- Justus Ilgner, University Hospital Aachen (Germany)
- Eric Kurland, 3-D SPACE (United States)
- Eleanor O'Keefe, KBR (United States)
- Nicholas Routhier, CubicSpace Technologies, Inc. (Canada)
- John Stern, Retired (United States)
- Laurie Wilcox, York University (Canada)

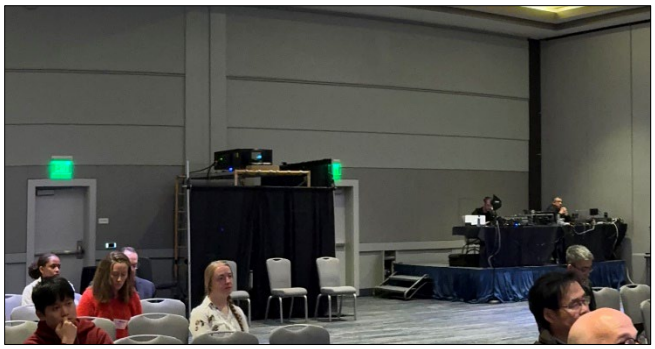

Figure 28. *The high-quality Stereoscopic Projection System (centre-back) from Christie Digital Systems and DepthQ Stereoscopic sitting snugly at the back of the large hotel ballroom. Photo: Andrew Woods.*

A Best Student Paper award was announced for this year's SD&A conference. The award went to Yusuke Ohira from Waseda University (Japan) for his presentation "Basic characteristics of body-visual interaction in mixed reality environments" [SDA-337]. (see Figures 8 and 29)

Figure 29. *Best student paper award for SD&A 2026.*

Tim Tams were again a feature of the coffee breaks of this year's conference and there was a selection of new flavors direct from Australia. Of course, "Tim Tam slams" were only undertaken for official experimental purposes. (Figure 2)

The SD&A conference has an online presence via our website and Linkedin. Visitors can refer to the SD&A website to learn about the extensive history of the conference, see a full listing of all conference papers and presentations across all 36 years of the conference, and refer to a selection of historical 3D books in PDF format. The SD&A conference website is at:

www.stereoscopic.org

The SD&A conference has had a Linkedin discussion group for some time where people can discuss a range of conference-related topics:

www.linkedin.com/groups?gid=1945944

Additionally, as setup last year, we now have a Linkedin profile for the SD&A conference:

https://www.linkedin.com/company/105913226/

You can follow this new Linkedin account from your own Linkedin account to have SD&A news come up in your Linkedin feed. This SD&A "Linkedin profile" will operate differently to the SD&A "Linkedin discussion group" which as the name suggests operates more like a traditional discussion group.

The conference also has an announce-only mailing list "SDA-list" which you can sign up for. Messages are infrequent and consist of only SD&A conference updates. If you're not already a member, you can subscribe here:

https://lists.curtin.edu.au/mailman/listinfo/sdalist

Most presentations at the 2026 SD&A conference and ERVR conference were recorded. They will progressively be made available on the Electronic Imaging YouTube channel:

https://www.youtube.com/@ElectronicImaging

Manuscripts presented at this year's conference, as well as conference presentation recordings, will also be indexed on the 2026 SD&A conference program webpage:

http://www.stereoscopic.org/2026

Conclusion

Next year's SD&A conference will be held in January 2027 as part of the 39th annual IS&T Electronic Imaging Symposium at the Hyatt Regency San Francisco Airport Hotel in Burlingame during the period 24-27 January 2027.

Join us for an immersive, in-depth, in-person 3D experience. To attend, present, or demonstrate at the 2027 SD&A conference, please visit the Electronic Imaging website www.ElectronicImaging.org or the SD&A conference website www.stereoscopic.org for details and deadlines. We look forward to seeing you there – in 3D!

Figure 30. *Chairs and Committee from the Stereoscopic Displays and Applications and Engineering Reality of Virtual Reality conferences. (Left to Right) Andrew Woods, Bjorn Sommer, Yoshihiro Banchi, Eleanor O'Keefe, John Stern, Takashi Kawai and Eric Kurland. Image in Anaglyph 3D (red left – cyan right) format.*

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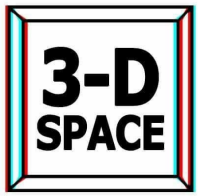

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Author Biographies

Andrew Woods is an Associate Professor at Curtin University where he manages the HIVE visualisation facility (Hub for Immersive Visualisation and eResearch) and is a Research Engineer at the Centre for Marine Science & Technology. He specialises in visualisation, stereoscopic 3D imaging, 3D reconstruction, 3D cameras and displays, video electronics, underwater vehicles (ROVs), and engineering software development, with applications in offshore oil and gas, and maritime archaeology. He has BEng and MEng degrees in electronic engineering and his PhD was on the topic of crosstalk in stereoscopic displays. He is a senior member of IS&T. He was the technology lead on the Sydney-Kormoran Project which surveyed the wrecks of HMAS Sydney (II) and HSK Kormoran in 2015, and imaging lead for the survey of the wreck of HMAS AE1 in 2018. In 2017 he was recognized as one of Australia's Most Innovative Engineers by Engineers Australia. He has been co-chair of the Stereoscopic Displays and Applications conference since 2000.

Takashi Kawai is a Professor in the Department of Intermedia Art and Science, Faculty of Science and Engineering, Waseda University, Japan. He received his Ph.D., M.A. and B.A. in Human Sciences from Waseda University in 1998, 1995 and 1993, respectively. His research interests include ergonomics and human factors in advanced imaging technologies such as stereoscopic imaging, virtual / augmented / mixed reality and cross-modal systems. He is a Certified Professional Ergonomist (CPE).

Bjorn Sommer is a Research Tutor at the Royal College of Art (London) where he is leading Year One of the Innovation Design Engineering program. He is working on the boundary of Visual/Immersive Analytics and design of ocean-related data, collective behavior, as well as mesoscopic and molecular data modelling. He has experience since more than a decade in the development of 3D-stereoscopic applications. He holds a B. Sc. in Media Informatics, an M.A. in Interdisciplinary Media Sciences, and a PhD in Bioinformatics from Bielefeld University. He is also part of the UNESCO Ocean Decade-associated NEMO (New Economic Models for the Ocean) team at the RCA and co-led in this context the Grand Challenge 2023/24 involving around 700 students in London-based design challenges.

Nick Holliman is a freelance researcher based in Brisbane, Australia. Until late 2024, he was a Professor of Computer Science at King's College London, researching the science and engineering of data visualization and visual analytics. His research has included working with psychologists to understand how the human visual system processes information, developing novel computational algorithms to control image quality and demonstrating how these algorithms work in practice in cloud-based visualization tools and award-winning stereoscopic 3D scientific visualizations. He has worked in both industrial and academic environments and is experienced in delivering commercial impact from research outputs

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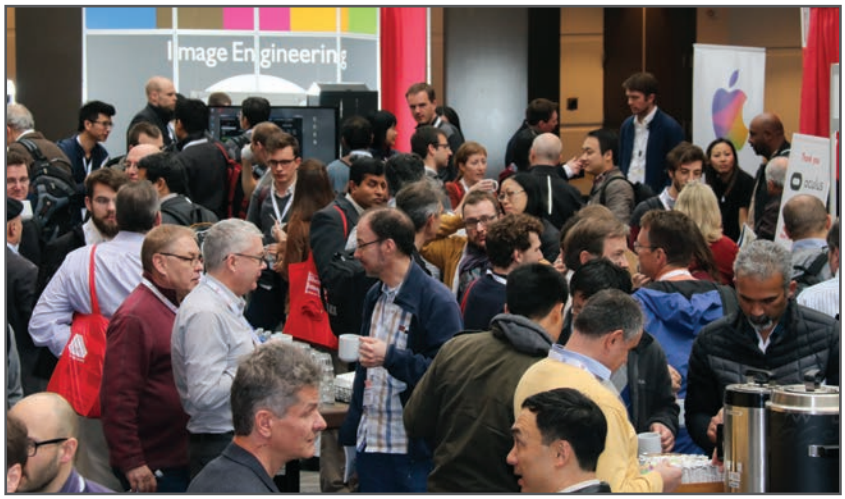

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