EVA London 2021
Proceedings of EVA London 2021

BCS London
2021

Editors:
Jon Weinel
Jonathan P. Bowen
Ann Borda
Graham Diprose
Preface

The Electronic Visualisation and the Arts London 2021 Conference (EVA London 2021) is co-sponsored by the Computer Arts Society (CAS) and BCS, the Chartered Institute for IT, of which the CAS is a Specialist Group.

Of course, this is a difficult time for all conferences, with the Covid-19 pandemic. As a result, the EVA London 2021 Conference is an online conference, as it was in the previous year as well. We continue with publishing the proceedings, both online, with open access via ScienceOpen, and also in our traditional printed form.

Over recent decades, the EVA London Conference on Electronic Visualisation and the Arts has established itself as one of the United Kingdom’s most innovative and interdisciplinary conferences. It brings together a wide range of research domains to celebrate a diverse set of interests, with a specialised focus on visualisation.

The long and short papers in this volume cover varied topics concerning the arts, visualisations, and IT, including 3D graphics, animation, artificial intelligence, creativity, culture, design, digital art, ethics, heritage, literature, museums, music, philosophy, politics, publishing, social media, and virtual reality, as well as other related interdisciplinary areas.

The EVA London 2021 proceedings presents a wide spectrum of papers, demonstrations, Research Workshop contributions, other workshops, and for the sixth year, the EVA London Symposium, in the form of an evening panel session with invited contributors. The conference includes a number of other associated online evening events including ones organised by the Computer Arts Society, Art in Flux, and the Lumen Prize.

A feature of EVA London, started in 2018, has been a Research in Education Day, immediately after the main conference, bringing together students and associated staff from universities in the London area to enable presentations and networking. In the circumstances, we now aim to hold this in conjunction with EVA London 2022.

As in previous years, there are Research Workshop contributions in this proceedings, aimed at encouraging participation by postgraduate students and early-career artists, accepted either through the peer-review process or directly by the Research Workshop chair. The Research Workshop contributors are offered bursaries to aid participation. In particular, EVA London liaises with Art in Flux, a London-based group of digital artists.

The EVA London 2021 proceedings includes long papers and short “poster” papers from international researchers inside and outside academia, from graduate artists, PhD students, industry professionals, established scholars, and senior researchers, who value EVA London for its interdisciplinary community. The conference also features keynote talks.

This publication has resulted from a selective peer review process, fitting as many excellent submissions as possible into the proceedings. This year, submission numbers were lower than previous years, mostly likely due to the pandemic forcing the conference online. It is still pleasing to have so many good proposals from which to select the papers that have been included.

EVA London is part of a larger network of EVA international conferences. EVA events have been held in Athens, Beijing, Berlin, Brussels, California, Cambridge (both UK and USA), Canberra, Copenhagen, Dallas, Delhi, Edinburgh, Florence, Gifu (Japan), Glasgow, Harvard, Jerusalem, Kiev, Laval, London, Madrid, Montreal, Moscow, New York, Paris, Prague, St Petersburg, Thessaloniki, and Warsaw. Further venues for EVA conferences are very much encouraged by the EVA community.
As noted earlier, this proceedings is a record of accepted submissions to EVA London 2021. We plan for associated online presentations to be recorded and made available online after the conference.
Acknowledgements

EVA London 2021 gratefully acknowledges:

- **BCS, The Chartered Institute for IT** for hosting EVA London online using Zoom, and the BCS **Computer Arts Society** (CAS) Specialist Group for providing bursaries. Special thanks go to Kerry Wear at the BCS, for help with budgeting, registration, and other organisational arrangements, as well as Becky Youe, Florence Leroy, and Ian Borthwick of the BCS Electronic Workshops in Computing (eWiC) series, for support with the printed and online conference proceedings.
- **The Anthill Social** and Tom Keene for website hosting and support.

Thank you to staff at the BCS Swindon office for help with administrative and IT support.

Thanks to all the contributors for making EVA London a continuing success.
Committee

- **EVA London 2021 Conference Chair:** Graham Diprose
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- **EVA London 2021 Symposium Co-Chairs:** Tula Giannini, Jonathan P. Bowen
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- **EVA London 2021 Workshop Co-Chairs:** Nick Lambert, Carl Smith
- **EVA London 2021 Publicity:** Sarah McDaid
- **EVA London 2021 Bursaries:** Graham Diprose
- **EVA London 2021 Website:** Jonathan P. Bowen
- **EVA London 2021 Technical Support:** BCS, The Chartered Institute for IT
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  - Jonathan P. Bowen, London South Bank University
  - Sean Clark, Interact Digital Arts
  - Graham Diprose, Independent
  - Tula Giannini, Pratt Institute, New York
  - Christina Hemsley, Independent
  - James Hemsley, Birkbeck College
  - Maureen Kendal, Dreamstudio.io
  - Nick Lambert, Ravensbourne University London
  - Sarah McDaid, London South Bank University
  - Gareth Polmeer, Royal College of Art
  - Aphra Shemza, Art in FLUX
  - Carl Smith, Ravensbourne University London
  - Terry Trickett, Trickett Associates
  - Jon Weinel, London South Bank University
List of Reviewers

The people listed below reviewed submissions for the EVA London 2021 Conference and the Organising Committee is very grateful for their voluntary help in the selection process.

❖ EVA London 2021 Programme Committee:

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Graham Diprose  Susan Liggett  Jon Weinel
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Eva Emenlauer-Bloemers  Andy Lomas  Ross Williams
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Kenneth Feinstein  Jon Malis  Jing Zhou
Raffaella Folgieri  Sarah McDaid  Rehan Zia
Francesca Franco  Murray McKeich  Tobias Ziegler
Giuliano Gaia  Lila Moore
Papers:

Keynotes & Symposium

http://dx.doi.org/10.14236/ewic/EVA2021.1

http://dx.doi.org/10.14236/ewic/EVA2021.2

Digital Culture and Museums

Jonathan P. Bowen & Tula Giannini  Digitality: A reality check  
http://dx.doi.org/10.14236/ewic/EVA2021.3

http://dx.doi.org/10.14236/ewic/EVA2021.4

Aila Regina da Silva & Gabriele Mauany Ferreira Alencar  Sharing Impressions: An investigation about participatory museums and UX design  
http://dx.doi.org/10.14236/ewic/EVA2021.5

Alexandra Orlova  Digitizing Art or How to Broaden the Viewer’s Experience  
http://dx.doi.org/10.14236/ewic/EVA2021.6

Claudio Germak, Andrea Di Salvo & Lorenza Abbate  Augmented Reality Experience for Inaccessible Areas in Museums  
http://dx.doi.org/10.14236/ewic/EVA2021.7

Digital Heritage

Dominik Lengyel & Catherine Toulouse  Visual Mediation of Unique Construction and Access Principles of the Amphitheatre of Durrës  
http://dx.doi.org/10.14236/ewic/EVA2021.8

Kristin Carlson, Lucy Gill, Zahra Irranezhad, Amal Abdalla, Annie Sungkajun, Sam Bruner & Ella Jahraus  Uncharted Territories: Developing digital experiences for anthropological and archaeological exploration  
http://dx.doi.org/10.14236/ewic/EVA2021.9

Sophie Dixon  Grace: A virtual recreation of the Grace Darling story  
http://dx.doi.org/10.14236/ewic/EVA2021.10

Benjamin Seide & Benjamin Slater  Performance Capture for Virtual Heritage: Virtual re-enactment for the lost film Pontianak  
http://dx.doi.org/10.14236/ewic/EVA2021.11

Amalia Foka  Computer Vision Applications for Art History: Reflections and paradigms for future research  
http://dx.doi.org/10.14236/ewic/EVA2021.12

Oliver M. Gingrich, Eike Falk Anderson, Alain Renaud, Evgenia Emets, David Negrao & Deborah Tchoudjinoff  New Heritage: New media art between cultural heritage experience and artefact  
http://dx.doi.org/10.14236/ewic/EVA2021.13
Adventures in Sound and Image

Jonathan Weinel Worship the Penguin: Adventures with sprites, chiptunes, and lasers  
http://dx.doi.org/10.14236/ewic/EVA2021.14

Anna Shvets & Samer Darkazanli Conditional GAN for Diatonic Harmonic Sequences Generation in a VR Context  
http://dx.doi.org/10.14236/ewic/EVA2021.15

Kyoko Hidaka Ubiquitous Lighting: The Third Color Digital Art × Lighting Symposium and Workshop  
http://dx.doi.org/10.14236/ewic/EVA2021.16

James Simpson Live and Life in Virtual Theatre: Adapting traditional theatre processes to engage creatives in digital immersive technologies  
http://dx.doi.org/10.14236/ewic/EVA2021.17

http://dx.doi.org/10.14236/ewic/EVA2021.18

Leslie Deere Experimental Affect: Gesture controlled audio-visual performance in VR  
http://dx.doi.org/10.14236/ewic/EVA2021.19

Annie Sungkajun & Jinsil Huaryoung Seo Though Miles Apart  
http://dx.doi.org/10.14236/ewic/EVA2021.20

Ziwei Wu, Shuai Xu & Yingyi Wang Invisible War: An audio visual installation with laser light and Twitter API data  
http://dx.doi.org/10.14236/ewic/EVA2021.21

Artistic Communities & Education

Bao Han & Jonathan P. Bowen The Weiguan Culture Phenomenon in Chinese Online Activism  
http://dx.doi.org/10.14236/ewic/EVA2021.22

Sonja Pedell & Ann Borda Social Prescribing the Smart City  
http://dx.doi.org/10.14236/ewic/EVA2021.23

Maureen Kendal, Fion Gunn, Nazia Parvez, Chen Mei-Tsen, Terri M. Broughton & Cleon Grant The Evolving Collaboration – AMazed! The A-Maze artists investigate immersive technology to create imagination and artifice  
http://dx.doi.org/10.14236/ewic/EVA2021.24

Oliver M. Gingrich GENDER*UCK: Reframing gender & media art  
http://dx.doi.org/10.14236/ewic/EVA2021.25

Aphra Shemza & Stuart Faromarz Batchelor SHEMZA.DIGITAL: Participatory art as a catalyst for social change  
http://dx.doi.org/10.14236/ewic/EVA2021.26

Olaoluwa Oyedokun, Kristin Carlson & Annie Sungkajun Embraced Separation: Exploring methods of breath attunement in speculatve infant swings  
http://dx.doi.org/10.14236/ewic/EVA2021.27

Cristina Portugal, Mónica Moura & Márcio Guimarães Design in Times of Pandemics: Accessible literature to people with visual impairment  
http://dx.doi.org/10.14236/ewic/EVA2021.28
Sandra Woolley & Tim Collins  Art for Computer Scientists: Processing as an open-source art medium for computer science Undergraduates  
http://dx.doi.org/10.14236/ewic/EVA2021.29

Carinna Parraman, Fabio D’Agnano & Wuon-Gean Ho  The Craftsperson, Tacit Knowledge, and Digital Embodiment  
http://dx.doi.org/10.14236/ewic/EVA2021.30

Artificial Intelligence

Dongyuan Liu  machinesMemory: Malleability of AI technique, the data generated by machine learning algorithms  
http://dx.doi.org/10.14236/ewic/EVA2021.31

Regula Valérie Burri, Merle Richter & Laura Sigrüner  Artificial Futures: Imagining AI through art  
http://dx.doi.org/10.14236/ewic/EVA2021.32

Konstantina Karterouli & Yota Batsaki  AI and Cultural Heritage Image Collections: Opportunities and challenges  
http://dx.doi.org/10.14236/ewic/EVA2021.33

Graham Wakefield & Haru Hyunkyung Ji  Creative Artificial Intelligence within the Artificial Life Installation “Infranet”  
http://dx.doi.org/10.14236/ewic/EVA2021.34

Ozan Yavuz  Novel Paradigm of Cameraless Photography: Methodology of AI-generated photographs  
http://dx.doi.org/10.14236/ewic/EVA2021.35

Imaging and Data Visualisation

Megan L. Smith & Yujie Gao  All The Stars We Cannot See: A deep look into real-time satellite traffic  
http://dx.doi.org/10.14236/ewic/EVA2021.36

Daniel Buzzo  Art as Data Set, Data Set as Art: Training machine vision systems to see as artists  
http://dx.doi.org/10.14236/ewic/EVA2021.37

Ian Willcock  Crowdsourcing: Using real-time social media data to repopulate the socially distanced world  
http://dx.doi.org/10.14236/ewic/EVA2021.38

Rehan Zia  Documenting Digital Creative Practice  
http://dx.doi.org/10.14236/ewic/EVA2021.39

Ashley Buchanan & Ron Snyder  Plant Humanities Lab: Planting the seeds for creative data visualisation  
http://dx.doi.org/10.14236/ewic/EVA2021.40

Digital Consciousness & Ecology

Terry Trickett  New Media Art as a Vehicle for Research and Innovation  
http://dx.doi.org/10.14236/ewic/EVA2021.41

Lila Moore & Owen Fender  Sentient: A social media environment as a conscious living system  
http://dx.doi.org/10.14236/ewic/EVA2021.42

Kenneth Feinstein  The Uncanny As a Sense of Presence in MX  
http://dx.doi.org/10.14236/ewic/EVA2021.43

Carl Hayden Smith  An Ecology for the Re-Enchantment of Life  
http://dx.doi.org/10.14236/ewic/EVA2021.44
Research Workshop

Graham Diprose, Frances Liddell, Marco Pini, Sarah Vollmer & Racelar Ho
Research Workshop Collected Paper: Explorations in concepts and the visual arts
http://dx.doi.org/10.14236/ewic/EVA2021.46

Joskaudė Pakalkaitė
Development of Noise-free Digital Interfaces: Hand-drawn interfaces
http://dx.doi.org/10.14236/ewic/EVA2021.47

Anton Dragan Maslic & Eugenia S. Kim
An Epistemological Misalignment of Cogs in the AI-Art-Making Machine
http://dx.doi.org/10.14236/ewic/EVA2021.48

Tyler H. McIntosh
Exploring the Relationship Between Music and Emotions with Machine Learning
http://dx.doi.org/10.14236/ewic/EVA2021.49

Peirui Yang
Archaeology and Contemporary Art: An experiment of virtual stratigraphy
http://dx.doi.org/10.14236/ewic/EVA2021.50

Workshops

Carl Hayden Smith, Daniel Buzzo & Eyal Gruss
EVA London 2021 Workshops
http://dx.doi.org/10.14236/ewic/EVA2021.51

In a Space Out of Time

Sean Clark & Geoff Davis
Revisiting and Re-presenting 1980s Micro Computer Art
http://dx.doi.org/10.14236/ewic/EVA2021.52

Luciana Haill & Nick Lambert
Synthesis: Making magic with GenieMo
http://dx.doi.org/10.14236/ewic/EVA2021.53

Gretchen Andrew
What if We Educated AI Based on the World We Want Instead of the World We Have?
http://dx.doi.org/10.14236/ewic/EVA2021.54