

Terence Broad

LinkedIn — Github
terencebroad.com

Email : t.broad@gold.ac.uk

EDUCATION

- **Goldsmiths, University of London** London
PhD: Computer Science; Topic: Manipulating Deep Generative Models October 2018 - Present
 - Supervisors: Professor Mick Grierson, Professor Frederic Fol Leymarie.
- **Goldsmiths, University of London** London
MSci Creative Computing; Distinction September 2012 - July 2016

EXPERIENCE

- **UAL Creative Computing Institute** London
Associate Lecturer Jan 2022 - Present
 - Associate lecturer and visiting researcher at the Creative Computing Institute at the University of The Arts London. Part of the team teaching and researching Creative Computing, Machine Learning and AI.
- **Freelance** Remote
AI & ML Consultant September 2021 - Present
 - Freelance machine learning consultant, working on various projects including using AI to curate an exhibition for the Zurich Design Museum and using AI to generate audio and visuals for Warp Records.
- **Vivacity Labs** London
Machine Learning Research Engineer October 2016 - October 2018
 - Responsible for managing large bespoke datasets, training models and benchmarking and evaluating new methods and frameworks for low power IoT computer vision applications in the smart city sector.
 - Worked in the software team that built the bespoke C++ library for doing on-device machine learning and data processing for IoT traffic sensors.
- **Goldsmiths Digital** London
Software Engineer June 2016 - October 2016
 - Developed an automatic CV scraping tool using Python and RegEx for the MyEcho jobs platform.
- **Wevolver** London
Technical Writer November 2014 - May 2015
 - Writing instruction manuals for open-source robotics projects for the Wevolver platform.
- **FutureDeluxe** London
Creative Technologist - Intern May 2014 - October 2014
 - Creative technologist internship at the digital design studio FutureDeluxe where I worked on a number of bespoke software projects for the advertising campaigns of clients including Converse and NVIDIA.

CONFERENCE & WORKSHOP PROCEEDINGS

- Terence Broad, Sebastian Berns, Simon Colton and Mick Grierson, **Active Divergence with Generative Deep Learning - A Survey and Taxonomy**. Proceedings of the Twelfth International Conference on Computational Creativity (ICCC), 2021 (Oral presentation).
- Sebastian Berns, Simon Colton, Christian Gucklesburger and Terence Broad, **Automating Generative Deep Learning for Artistic Purposes: Challenges and Opportunities**. Proceedings of the Twelfth International Conference on Computational Creativity (ICCC), 2021.
- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Network Bending: Expressive Manipulation of Deep Generative Models**. Proceedings of the 10th International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART), 2021.
- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Amplifying The Uncanny**. Proceedings of the 8th Conference on Computation, Communication, Aesthetics & X (xCoAx), 2020.
- Terence Broad and Mick Grierson, **Searching for an (un)stable equilibrium: experiments in training generative models without data**. NeurIPS Workshop on Machine Learning for Creativity and Design 3.0, 2019.

- Shaun Howell, Simon Cole, Terence Broad and Tommi Maatta, **IoT and Machine Learning for Next Generation Traffic Systems**. Transport Practitioners Meeting, 2018.
- Terence Broad and Mick Grierson, **Light Field Completion Using Focal Stack Propagation**. SIGGRAPH '16 Posters, 2016.

JOURNAL ARTICLES

- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Network Bending: Expressive Manipulation of Generative Models in Multiple Domains**. Entropy, 24(1), 2022.
- Terence Broad and Mick Grierson, **Autoencoding Blade Runner: Reconstructing films with artificial neural networks**. Leonardo, 50(4), 2017.

ACADEMIC THESES

- **Autoencoding Video Frames**. Masters Thesis, Goldsmiths, University of London, 2016.
- **Light Field Completion Using Focal Stack Propagation**. Undergraduate Thesis, Goldsmiths, University of London, 2015.

PRE-PRINTS

- Terence Broad and Mick Grierson, **Transforming the output of GANs by fine-tuning them with features from different datasets**. arXiv:1910.02411, 2019.

WORKSHOPS AND TUTORIALS

- Tutorial organizer, *A Deep Dive into Latent Space: Image Generation and Manipulation with StyleGAN2*, International Conference on Computational Creativity (ICCC) 2020.

AWARDS AND HONOURS

- **Grand Prize** - ICCV Computer Vision Art Gallery, 2019.
- **Recognition of Outstanding Peer Review** - Leonardo, 2019.
- **Honourary Mention** - Prix Ars Electronica, 2017.
- **Best Masters Thesis** - Department of Computing, Goldsmiths, 2016.
- **Best Technical Work** - Goldsmiths Computing Innovation Awards, 2015.
- **Best Creative Work** - Goldsmiths Computing Innovation Awards, 2014.

PROFESSIONAL ACTIVITIES

- Visiting Researcher, UAL Creative Computing Institute, 2019 - Present.
- Ad hoc reviewer for Leonardo, 2019 - Present.
- Reviewer for International Journal of Electrical and Computer Engineering, 2022.
- Art Papers Juror, ACM SIGGRAPH, 2021.
- Organising Committee, IGGI Conference, 2020.
- Guest Judge, Science Fiction Hackathon, Goldsmiths, University of London, 2018.
- Reviewer for IEEE Transactions on Image Processing, 2017.

TEACHING EXPERIENCE

- Mater's Thesis Supervision for *Msc Creative Computing*, UAL CCI (PG), Summer Term 2022.
- Associate Lecturer for *Exploring Machine Intelligence*, UAL CCI (PG), Summer Term 2022.
- Associate Lecturer for *Research Design and Experimental Data*, UAL CCI (PG), Spring Term 2022.
- Guest Lecturer for *Critical Studies*, UAL CCI (PG), Spring Term 2022.
- Teaching Assistant for *Neural Networks*, Goldsmiths (UG), Spring Term 2021.
- Teaching Assistant for *Software Projects (Year 1)*, Goldsmiths (UG), Spring Term 2021.
- Teaching Assistant for *Introduction to Programming*, Goldsmiths (UG), Autumn Term 2020.
- Teaching Assistant for *Front End Web Development*, Goldsmiths (UG), Autumn Term 2020.
- Teaching Assistant for *Data and Machine Learning for Artist Practice*, Goldsmiths (PG), Spring Term 2020.
- Teaching Assistant for *Perception and Multimedia Computing: Graphics*, Goldsmiths (UG), Spring Term 2020.
- Teaching Assistant for *Data and Machine Learning for Creative Practice*, Goldsmiths (UG), Autumn Term 2019.
- Teaching Assistant for *Perception and Multimedia Computing*, Goldsmiths (UG), Autumn Term 2019.
- Teaching Assistant for *Creative Projects (Year 2)*, Goldsmiths (UG), Autumn Term 2019.

INVITED TALKS

- *Beyond Imitation: Manipulating generative models and diverging from data*, Goldsmiths, University of London, 2022.
- *Beyond Imitation: Manipulating generative models and diverging from data*, UAL Creative Computing Institute, 2021.
- *Beyond Imitation: Manipulating generative models and diverging from data*, SIGGRAPH SPARKS, Online, 2021.
- *Active Divergence with Generative Deep Learning*, ICCV'21, ~~Mexico City~~ Online, 2021.
- *Artist talk*, the depot_, London, 2021.
- *Network Bending: Expressive Manipulation of Deep Generative Models*, EvoStar, Seville Online, 2021.
- *Amplifying The Uncanny*, xCoAx, Graz Online, 2020.
- *What is the best approach to learning representations of aesthetics?*, IGGI Conference, University of York, 2019.
- *Autoencoding Blade Runner*, SIGGRAPH '17, Los Angeles Convention Center, 2017.
- *Autoencoding Blade Runner*, Cambridge Coding Academy, London, 2016.
- *Autoencoding Blade Runner*, RE WORK Deep Learning Summit, London, 2016.
- *Autoencoding Blade Runner*, CreativeAI Meetup #1, Google Campus London, 2016.

FUNDING AND SCHOLARSHIPS

- EPSRC Doctoral Studentship in Intelligent Games and Games Intelligence, 2018.
- Eliahou Dangoor Scholarship, 2012.

SELECTED EXHIBITIONS

- *FILE Festival*, Fiesp Cultural Center, São Paulo, 2022.
- *Reflections in the Water*, Feral File, Online, 2021.
- *the depot_ digs*, the depot_, London, 2021.
- *NeurIPS AI Art Gallery*, ~~Vancouver Convention Center~~ Online, 2020.
- *thereafter.hiatus*, one gee in fog, Geneva, 2020.
- *CCI Inaugural Exhibition*, Camberwell College of Art, London, 2020.
- *NeurIPS AI Art Gallery*, Vancouver Convention Center, Vancouver, 2019.
- *ICCV Computer Vision Art Gallery*, COEX Convention Center, Seoul, 2019.
- *Science Fiction - A Journey into the Unknown*, Kunsthall, Rotterdam, 2019.
- *Into the Unknown*, Brandts Museum of Art & Visual Culture, Odense, 2018-19.
- *IAM*, Garage Museum of Contemporary Art, Moscow, 2018.
- *Counting The Waves*, Bard Hessel Museum, New York, 2018.
- *Science Fiction: A Journey into the Unknown*, Onassis Cultural Centre, Athens, 2017-18.
- *All these Moments will be lost in Time like Tears in Rain*, FMAC, Geneva, 2017.
- *Ars Electronica Festival*, Ars Electronica, Linz, 2017.
- *Into the Unknown: A Journey through Science Fiction*, The Barbican, London, 2017.
- *Why Future Still Needs Us: AI and Humanity*, Art Center Nabi, Seoul, 2016.
- *Robot Vision Party*, The Photographers Gallery, London, 2016.
- *Dreamlands: Immersive Cinema and Art, 1905–2016*, Whitney Museum of American Art, New York 2016-17.

SCREENINGS

- *Besides The Screen: Graphic Intelligences & Algorithmic Fictions*, Museum of Image and Sound, São Paulo, 2019.
- *Impakt Festival*, Impakt Center, Utrecht, 2018.
- *Its origins are indeterminate*, Whitechapel Gallery, London, 2018.
- *Ars Electronica Animation Festival*, Ars Electronica Center, Linz, 2017.
- *Dreamlands: Immersive Cinema and Art Film Program*, Whitney Museum of American Art, New York, 2017.
- *Pluk De Nacht*, Amsterdam, 2016.
- *PANDO@EnclaveLab*, Enclave Gallery, London, 2016.

COLLECTIONS

- *Blade Runner - Autoencoded*, The Contemporary Art Collection of the City of Geneva, Acquired 2018.

SELECTED PRESS

- **Cueva Gallery**, *Tweaking AI with Terence Broad*, 2020.
- **New Scientist**, *This science fiction trip is delightful, confusing – and risky*, 2017.
- **The Independent**, *Blade Runner, Autoencoded: The strange film that sums up our fears of AI and the future*, 2017.
- **Motherboard**, *The Neural Net That Recreated ‘Blade Runner’ Has the Movie Stuck in Its Memory*, 2017.
- **The New York Times**, *Diving Into Movie Palaces of the Mind at the Whitney*, 2016.
- **The Wall Street Journal**, *At the Whitney, a Different Take on the Moving Image*, 2016.
- **AQNB**, *The future is only an extension of our past: BB9 + beyond*, 2016.
- **CBC Radio**, *An Artificial Intelligence remade Blade Runner*, 2016.
- **Vox**, *A guy trained a machine to “watch” Blade Runner. Then things got seriously sci-fi.*, 2016.
- **TechCrunch**, *Oculus Hack Uses Cameras And Music To Mess With Your Perception.*, 2014.