# Terence Broad

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terencebroad.com


## Education

- **Goldsmiths, University of London** — London
  *PhD: Computer Science; Topic: Manipulating Generative Models* — *October 2018 - Present*
- **Goldsmiths, University of London** — London
  *Msci Creative Computing; Distinction* — *September 2012 - July 2016*

## Experience

- **UAL Creative Computing Institute** — London
  *Visiting Researcher* — *October 2019 - Present*
  - Visiting researcher at the newly found Creative Computing Institute at the University of The Arts London. Part of the team researching Creativity, Machine Learning and AI.
- **Vivacity Labs** — London
  *Machine Learning Research Engineer* — *August 2017 - 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.
- **Vivacity Labs** — London
  *Software Engineer* — *October 2016 - July 2017*
  - Worked in the software team building 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*
  - Wrote an automatic CV scraping tool using Python and RegEx for the MyEcho jobs platform.
- **Wevolver** — London
  *Technical Writer* — *September 2014 - April 2015*
  - Writing instruction manuals for open-source robotics projects for the Wevolver platform.
- **FutureDeluxe** — London
  *Creative Technologist - Intern* — *May 2014 - October 2014*
  - Worked as a creative technologist at digital design studio FutureDeluxe where I worked on a number of bespoke software projects (such as advanced slitscanning) for clients inluding Converse and NVIDIA.

## Publications

- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Network Bending: Manipulating The Inner Representations of Deep Generative Models.** Pre-print (under-review), 2020.
- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Amplifying The Uncanny** 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.
- Terence Broad and Mick Grierson, **Transforming the output of GANs by fine-tuning them with features from different datasets.** Pre-print, 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, **Autoencoding Blade Runner: Reconstructing films with artificial neural networks.** SIGGRAPH '17 Art Papers, 2017.
- Terence Broad, **Autoencoding Video Frames.** Masters Thesis, Goldsmiths, University of London, 2016.
- Terence Broad and Mick Grierson, **Light Field Completion Using Focal Stack Propagation.** SIGGRAPH '16 Posters, 2016.

## 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.

## Funding and Scholarships

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

## Workshops and Tutorials

- Tutorial organizer, *Deepdive into latent space with StyleGAN2*, ICCC 2020.

## Teaching Experience

- Teaching Assistant for *Data and Machine Learning for Artist Practice* (Postgraduate), Spring Term 2020.
- Teaching Assistant for *Perception and Multimedia Computing: Graphics* (Undergraduate), Spring Term 2020.
- Teaching Assistant for *Data and Machine Learning for Creative Practice* (Undergraduate), Autumn Term 2019.
- Teaching Assistant for *Perception and Multimedia Computing* (Undergraduate), Autumn Term 2019.
- Teaching Assistant for *Creative Projects (C++)* (Undergraduate), Autumn Term 2019.

## Professional Activities

- Reviewer for Leonardo (MIT Press), 2019.
- Guest Judge, Science Fiction Hackathon, Goldmiths, University of London, 2018.
- Reviewer for IEEE Transactions on Image Processing, 2017.

## Programming Skills

- **Languages**: Python, C, C++, C#, Javascript, Java, CUDA, LaTeX.
- **Technologies and Frameworks**: PyTorch, TensorFlow, OpenCV, OpenGL, Docker, NumPy, Sci-kit Learn.

## Invited Talks

- *Amplifying The Uncanny*, xCoAx, Online, 2020.
- *What is the best approach to learning representations of aesthetics?*, IGGI Conference, University of York, 2019.
- *Autoencoding Blade Runner*, SIGGRAPH '17 Art Papers, Los Angeles Convention Center, 2017.
- *Autoencoding Blade Runner*, Cambridge Coding Academy, London, 2016.
- *Autoencoding Blade Runner*, RE WORK Deep Learning Summit, London.
- *Autoencoding Blade Runner*, CreativeAI Meetup #1, Google Campus London.