

Kat F Austen PhD

I am an interdisciplinary practitioner with a passion for the environment, digital media and understanding the world's complex networks. I now work creatively as an artist, researcher, designer and community engagement specialist at the intersection of arts, science and technology. I have excellent project management and team working skills, honed over the last 15 years of working across disciplines. I believe individuals are unique and wonderful, and closely intertwined within society. As such I have a passion for engaging with and building communities and for communicating complex ideas in written, designed and artistic formats.

Key Skills: art, research, writing, communications, systems thinking, design, interactional expertise, creative problem solving, project co-ordination, environmental science, water resilience, co-creation, chemistry, futures, community management, open source

RECENT ARTWORKS

- **The Matter of the Soul - [current](#)** The Matter of the Soul explores the potential of creating empathy with the Arctic region by focussing on the concept of dispersal. I have used hacked scientific equipment to sonify measurements of variables in Arctic waters that are affected by glacial and seaice melting. Combined with in-depth interviews about migration, tourism and identity, I will create a sound work to be played through a sculpture and to be hosted online, where it itself will disperse.
- **[Vital | Flows](#) (2015-ongoing)** Vital | Flows is an answer to the question of post-truth. It is an exploration of transdisciplinary practice as a route to more integrated relationships between the self and other. The theme of this exploration is food - as an embodiment of our diffuse boundaries, of the transmutation of matter, of changing aesthetics, of social interaction, of power, accessibility, equality, agency. Techniques include DIY science, cultural exchange, aesthetic eating, exploration of food aesthetics and governance, systems thinking, forum theatre...
- **[The Coral Empathy Device](#) (2015-16)** The Coral Empathy Device is a wearable multi-sensory experience that fosters empathy and embodiment as forms of knowledge, exploring them as a technologically mediated means for connecting with the marine environment. It works by translating coral's experience of anthropogenic effects in their native environment of water into human-perceivable signals in humans' native environment. Obliterating the visual, the Coral Empathy Device immerses the wearer in a vibrating reality. Liquid to air, coral to human, the Coral Empathy Device is an experiment in interspecies empathy.
- **[Not Waving](#) (2015)** We are a drowning world. Arctic ice is diminishing year by year. Not Waving is an interactive installation of melting ice, drowning micropeople and Twitter that explores the dissonance between clicktivism and its carbon footprint, to shine a lens on how we judge the effectiveness of our climate activism, on and offline.

ARTIST RESIDENCIES

Artist in the Arctic 2017, Friends of SPRI, Scott Polar Research Institute, University of Cambridge

[Artist in Residence](#), Faculty of Mathematics and Physical Sciences, University College London, March 2015-ongoing

[Artist in Residence](#), NYU Shanghai Gallery and PCI, NYU Shanghai, Shanghai, April 2016

Artist in Residence, Stereotropic Anedota, Art Oxygen, Mumbai, February 2016

ARTIST RESIDENCIES continued

Digital Art Lead, LAs theatre, New Atlantis project, 2014-2015

Writer in Residence, Faculty of Mathematics and Physical Sciences, University College London, March 2013-March 2015

Artist in Residence, 2009 - 2014 for spoken word organisations: Utter! Spoken Word, Poetry Kapow!, Days of Roses

Artist and scientist, The Clipperton Project, January - December 2013

EXHIBITION HISTORY

Solo Shows

- **Flows 1.0** at Mono, Berlin 2017 May 18 - June 2
- [Coral Empathy Device](#), new media interactive installation artwork at NYU Shanghai, Shanghai, China, 2016 April 11-20
- [Not Waving](#), multimedia interactive installation exhibition at The Crystal, London, UK as part of New Atlantis by the Enlightenment Cafe, 2015 January 19-25
- [Elements](#), digital-physical installation exhibition at University College London's Degrees of Change Week, London, 2014 October 18-24
- [Flows 1.0](#) systems artwork exhibition at OKFest, Kulturbrauerei, Berlin, Germany, 2014 July 15-17
- **Re-Cycle 1** Williams Art Gallery, Cambridge 2007

Selected Group Shows

- **Vital | Flows** at DPMA-TIZ, Berlin, 2017 June 24 - July 2
- **Coral Empathy Device** at labore:tory, Kühlhaus, Berlin, 2017 May
- **Vital | Flows Smorgasbord**, SPACE, London, UK, 2017 January
- **By the Sea: the Coral Empathy Device**, Píksel Zero Level, Bergen, Norway, 2016 November
- **Sushi Roulette**, S.Net, Bergen, Norway, 2016 October
- **By the Sea: the Coral Empathy Device**, Pixelache, Helsinki, Finland, 2016 September
- **Not Waving** at Science Underground Academy, Dubrovnik, Croatia, 2016 July
- **DNA Sci Fi Cocktails** performance at MIKK, Murska Sobota, Slovenia, 2015 December 11
- **Coral Empathy** as part of [Píkslo Deep Dive](#) at Píksel Festival 2015, Bergen, Norway, 2015, November
- [Treading the Steep Route: Flows 2.0](#) at Palazzo Ducale, Genoa, Italy, 2015 October

Stereotropic Anecdota collective

- **Belljar**, digital-physical public art installation at NYU Shanghai, Shanghai, China, 2016 April - ongoing
- **Snowglobe**, digital-physical public art installation at Carter Road Promenade, Mumbai, India, 2016 February 18-21 and ongoing at St Xavier's College, Mumbai, India

SIGNIFICANT EMPLOYMENT ACHIEVEMENTS

[Lecturer](#), *Citizen Science for Radical Change: Co-design, Art and Community, Arts and Sciences BAsc*, University College London, January 2017 - March 2017 (repeating next year)

I created this undergraduate course to synthesise artistic and scientific research practices using interdisciplinary research-based learning methods in combination with theory. It is *based on my open source artistic project [Vital](#)*.

Techniques employed include:

- DIY/ citizen science: chemical analysis of micronutrients in food
- forum theatre
- installation co-design and co-creation with a community of young people
- cultural exchange
- foraging

Head of Research and Design, [iilab](#) May 2014 - July 2017

I led the research and design team in this tech-for-social-good startup. Working as part of a team, I oversaw ethnographic, infrastructural and engineering research, and worked closely with industry and academic partners to deliver hardware and software solutions that ensured open data, open source, digitally secure and environmentally resilient technology solutions.

Key responsibilities:

- project management
- co-ordination with partners
- research planning and execution, reporting, writing publications
- community co-design strategy, workshop design and execution
- user-centric research and design
- leading the research and design team
- co-ordinating between client needs with the tech team
- hardware and materials design
- UX design

Projects:

- Research and design lead, Influence Mapping Toolbox
- Lead in partnering on Engineering Comes Home EPSRC funded project with UCL and Newcastle University
- Lead in partnering on UCL's Geomatic Engineering MSc

Editor, *Think Smarter for Penguin Publishing*, January 2014-January 2015

I established *Think Smarter*, an interdisciplinary newsletter from Penguin, setting the bar for thought-provoking, challenging content that went beyond the publishers' own catalogue to provide a rich overview of content anchored in current affairs and thought leadership.

Key responsibilities:

- Editing, commissioning and writing engaging, clickable content
- Trend identification

Editor, *CultureLab, New Scientist*, January 2011- April 2014 (part time from November 2012)

Over 3 years I shaped the arts and books coverage online and in print for the world's best selling popular science magazine. During my time as CultureLab editor, *New Scientist* was at the cutting edge of interdisciplinary practice and arts and science reporting.

Key responsibilities:

- Editing, commissioning and writing content for the magazine's CultureLab section online and in print (2.5 pages per week), proofreading
- Writing news, opinion and feature articles
- Audio and video commissioning and editing

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- Building the CultureLab community - twitter, crowdsourced interviews, competitions
- Consulting on layouts

Letters and Comment editor, New Scientist, February 2009-December 2010

Key responsibilities:

- Editor of all contributions for the magazine letters page
- Writing for the magazine and online
- Development of the online community through newscientist.com and social networking
- Commissioning artwork
- Legal training for print and web content

Post-doctoral Research Associate, eMinerals, Department of Earth Sciences, University of Cambridge, November 2005-August 2008 Computational chemical research into environmentally important systems mathematical techniques

SciSpace Founder Founder of www.scispace.com, "the social networking site for scientists", developed to help scientists working at different scales to share and help interpret data. Launched July 2007, sold on in 2009

OTHER TRAINING AND EXPERIENCE

PhD in Chemistry, University College London and Davy Faraday Research Laboratories, The Royal Institution of Great Britain, London, 2006 Computer modelling of the Structure and Reactivity of Carbonate Minerals

MSci in Chemistry 2:1 University College London, 2001 Dissertation: Computational Study of the Migration of Oxygen Vacancies in Tungsten Oxide

Metal and Sculpture, Central St Martins College of Art and Design, London, 2010

Mixed Media Artwork, Hills Road College, Cambridge, 2008

Active member of History of Chemistry group **ADHOC** (UCL and Cambridge) since 2003

RECENT PUBLIC SPEAKING

- [Radical Change in How We Connect to the Environment](#), re:publica 2017, May 2017
- **Experiments in Interspecies Empathy: The Coral Empathy Device**, University of Fine Arts Poznan, 3 December 2016
- [Experiments in Interspecies Empathy: The Coral Empathy Device as part of Living Systems Aquatic Systems Seminar](#), Art Laboratory Berlin, 18 September 2016
- **Sushi Roulette workshop**, 11-14 October 2016
- **DIY Microplastic Analysis for Artistic Exploration**, Science Underground Academy, Natural History Museum, Dubrovnik, 13-20 July 2016
- **Connecting with Communities**, Ofwat Community Engagement Workshop, London, 13 July 2016
- [In Search of Knowing](#), NYU Shanghai, Shanghai, 18 April 2016
- [Art as a Mode of Connecting with the Environment](#), NYU Shanghai Sustainability Conference, Shanghai, 16 April 2016
- **The Width of Air**, What about art?, Mumbai, 25 February 2016

- **The Width of Air**, St Xavier's College, Mumbai, 24 February 2016
- [Challenges and Opportunities in developing citizen science projects](#), Countdown2030, UCL Institute of Global Prosperity, 28 November 2015

PROFESSIONAL ADVISORY POSITIONS AND ASSOCIATIONS

London Creative Network beneficiary

Watef Network member

Expert in ICT, Art and Culture for the European Commission, March 2013-ongoing

Member of the Future Shapers Network, Forum for the Future, May 2014-ongoing

Consultant for Water Resilience Advisory Group for UK Water Regulatory Body OfWAT 2015-2016

SELECTED PUBLICATIONS

- "Citizen Science 2030: exploring the implications of the Sustainable Development Goals and the Millennial Generation" (submitted, Citizen Science: Theory and Practice) Kat F Austen et al.
- "Experiments in Interspecies Empathy: The Coral Empathy Device" (in preparation) Kat F Austen
- "The future ensures destruction of the chronically overwhelmed" (submitted to Oxford Artistic Research Platform), Kat Austen
- "[The Art of Health](#)" Report, Kat Austen, (2016) Wellcome Trust
- "[Resilience Task and Finish Group](#)", Report, Austen et al. (2015) Ofwat
- "Theory Choice in Chemistry: Attitudes to Computer Modelling in Chemistry", Kat F Austen (2016), in **Theory Choice in the History of Chemical Practices**, Eds. Emma Tobin and Chiara Ambrosio, SpringerBriefs
- "What could derail the wearables revolution?" Kat Austen (2015), **Nature**, 525, 22-24
- "Pollution Patrol" Kat Austen (2015), **Nature**, 517, 136-138
- "How to be really open" Kat Austen (2014) **New Scientist** 223(2981):44-45
- "Out of the lab and into the streets", Kat Austen (2013), **New Scientist**, 281, [2923](#), 48-51
- "Electrostatic versus polarization effects in the adsorption of aromatic molecules of varied polarity on an insulating hydrophobic surface" Kat F Austen, Toby O H White, Arnaud Marmier, Steve C Parker, Emilio Artacho and Martin T Dove , (2008), **J. Phys.: Condens. Matter** 20 035215
- "The interaction of dolomite surfaces with metal impurities: a computer simulation study", Kat F. Austen, Kate Wright Ben Slater and Julian D. Gale, (2005) **Phys. Chem. Chem. Phys.**, 7, 4150-4156
- "Density Functional Theory Study of the Binding of Glycine, Proline, and Hydroxyproline to the Hydroxyapatite (0001) and (0110) Surfaces", Neyvis Almora-Barrios, Kat F. Austen, and Nora H. de Leeuw, (2009) **Langmuir**, 25(9), 5018-5025

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