



Maths made Art

(Jake Langham & Matthew Lee, CREATE-REACT, since 2018)

[Themes]

Cultural Impact
Creative Engagement
Equitable Partnerships

Art collaborations open up complex mathematical research to diverse audiences, reveal cultural value and societal relevance

[Aim & Approach] Mathematics research is often complex and theoretical, but artistic ways of engagement can make it accessible. This long-term project, led by Dr Jake Langham, allowed researchers from across the School of Mathematics to collaborate with artists. By exploring creative engagement methods, they gained new perspectives on their research's potential impact, relevance to society and engaged diverse audiences.



[Practical Details] The initial collaborations in Maths were funded by a £15K [EPSRC Impact Acceleration Account](#) (IAA) grant in 2018/19, with a follow-up grant of £27.5K for a longer-term Artist in Residence post in 2020-22.

[Key Partnerships] [CREATE-REACT](#) is a unique Bristol-based community project which pairs artists and scientists together to create original art pieces based on research, enhancing and broadening both artistic and academic practice.

[Activity & Outcomes] As part of the 2019 Creative Reactions project, facilitated by Matthew Lee of CREATE-REACT, 8 creative practitioners and 8 mathematicians collaborated to produce a variety of artworks inspired by pure and applied maths research, culminating in a [month-long exhibition](#) at two Bristol locations, with over 3,000 visitors. Researchers and artists delivered workshops for children & adults and engaged directly with visitors. [Feedback](#) showed people's interest in and understanding of the research was stimulated by the pieces and the conversations they sparked, changing their perceptions of maths. Schools said that the workshops gave students a novel way into STEM. Artworks have been displayed at conferences and artists' shows, and are used at open days to explain research themes. Individual partnerships continue, in some cases written into grant proposals. The 2021 [artist residency](#) enabled composer Liam Taylor-West to develop deeper collaborations with 5 maths researchers. They worked with local schools to create an audio-visual exhibition '[IN/FINITE: Order in the Unknown](#)' and a set of [video teaching resources](#).

[Support] The Public Engagement team helped build equitable artist-researcher relationships, a key part of any partnership. We also provided funding advice; supported bid-writing; facilitated connections with exhibition audiences; and gave guidance on navigating internal university processes, to ensure timely payment of collaborators.

[Impacts] Researchers gained valuable insights into their work's relevance and collaborations have changed artists' and academics' working practices. Jake says *"Through extended dialogue with creative practitioners, our mathematicians have found new ways to effectively engage. The artworks provide common ground between researcher and audience, spark meaningful conversations and give people an accessible way into Maths."* The project shows how artistic approaches help translate complex topics, generate measurable cultural impact, and reveal the societal relevance of maths for all involved.

Public Engagement

Strengthening research with conversations that count