

**Mukul N. Patel**

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w: <http://mukul.works><http://emergence.is><http://ambienttv.net>**Current projects**

I am currently a Fellow at the Institut für die Wissenschaften vom Menschen in Vienna (through February, 2022),. In my work, I consider the mathematics and sciences that underpin and inform ubiquitous networked computing as rich sources of structures, approaches, and processes that can serve as radical models of thinking and metaphors for living. Concurrently, I am further developing the open media archive 'Soundings' for the IWM's Sounds of Democracy project.

<http://soundings.0x2620.org>**Researcher-writer**

My writing ranges from critical perspectives on social and technological infrastructures to film scripts voiced by Tilda Swinton, an acclaimed children's book on mathematics, and contributions to encyclopaedias on topics including abstract algebra, bioethics, GPS technology, and the politics of urban wireless networks. Through my writing, I articulate and make vivid difficult, contested or technical concepts, using novel imagery and analogies to animate ideas and demystify jargon.

**Artist-composer**

I have extensive experience in composition for dance and film, and 20 years of critical intermedia arts practice. I play with diverse media to explore relationships between rule-bound forms (both classical and novel) and chance, between technology and tradition, and between signal/data/music and noise. An interest in the grammars of different media has naturally led to collaborations and to works utilising hybrid media. Formally, my work is informed by the music of North India, OuLiPo, and 1960s conceptual practice. Together with Manu Luksch, I directed London-based Ambient Information Systems, a studio for the development of investigative tools, responsive environments and participatory processes since 2001.

**Consultancy and development**

Recent work as consultant to Billings Jackson Design (who specialise in human-centred urban infrastructure) includes developing the sound infrastructure for what will be the tallest building in the world (DCH Tower, Dubai by Santiago Calatrava) and conducting a preliminary ethical audit for a proposed smart wayfinding system in the city of Bristol.

**Education**

2016 MSci Mathematics, Imperial College London

Final year paper: *Quantum Computers and Public-Key Cryptosystems*Shared 2012 Winton Capital Prize for the paper *Functional Equations from Gamma to Zeta* (with E. Fenati, S. F. Lam, and R. Picciotto)

2001 Berkeley Fellowship University of California

1992 BA Natural Sciences / Social &amp; Political Sciences, King's College, Cambridge

## **Publications (Technology, Ethics, Art)**

'To be connected: perspectives on autonomy and risk from the Electric Age'  
(with Manu Luksch) in A. Chapman, N. Hume, & C. Newland, eds. *Coding and Representation from the Nineteenth Century to the Present: Scrambled Messages*. London: Routledge, 2020.

'Prediction'  
(with Manu Luksch) in D. Agostinho, C. D'Ignazio, A. Ring, N. Thylstrup, & K. Veel, eds. *Uncertain Archives*. Cambridge: MIT Press, 2020.

*3,159 Tweets*  
(coeditor with Manu Luksch) English/Arabic A0-size poster/booklet about human rights defender Ahmed Mansoor, currently incarcerated in the UAE, 2019.

'A Brief History of Real Time'  
in W. Sützl, ed. *Creating Insecurity*. Plymouth: Ply. Univ. Press / Autonomedia, 2009.

*Ambient Information Systems*.  
(contributing editor, with Manu Luksch). London: AIS, 2009.

*ambient.vista 2008*  
Catalogue: artists residencies of Wolfgang Staehle, Tuomas Toivonen, Fahim Amir, Shiho Fukuhara. London: AIS, 2008.

'Chasing the data shadow. A filmmaker's close-up encounter with the Data Protection Act'  
(with Manu Luksch) in G. Stocker & C. Schöpf, eds. *Ars Electronica: Goodbye Privacy*. Berlin: Hatje Cantz Verlag, 2007.

'Wearable Computing and Wireless Networks'  
(with Manu Luksch) in E. Salmi & J. Lantto, eds. *Cumulus Working Papers: Tallinn*. Helsinki: University of Art & Design, 2003.

## **Publications (Mathematics , Popular Science)**

*The Physics Book*. London: Dorling Kindersley, 2020.  
Contributor

*The Maths Book*. London: Dorling Kindersley, 2019.  
Contributor

*We've Got Your Number*. London: Kingfisher, 2013.  
Author

\*Shortlisted: Royal Society Young People's Book Prize 2014.

\*Longlisted: School Library Association Information Book Award 2014.

*Scientific American's How Things Work Today*. London: Marshall, 2000.  
Consultant Editor

## **Selected work for film**

*Sing and Cry, Cry and Sing* (Manu Luksch, 2021)  
Composer

*Contagious Whisper* (Scott Killdal & Manu Luksch, 2020)  
Cowriter, composer, visual FX

*Algo-Rhythm* (Manu Luksch, 2019)  
Cowriter, composer, software programmer  
\*ZONTA Award, 65th Kurzfilmfest Oberhausen

*Third Quarterly Report* (Manu Luksch, 2019)  
Quadraphonic sound design and mix

*Kairos* (Russell Maliphant, Warren Du Preez, Nick Thornton Jones, 2016)  
Composer

*Dreams Rewired* (Manu Luksch, Martin Reinhart, Thomas Tode, 2015)  
Cowriter, sound designer  
\*Transcript in the Core Collection, Margaret Herrick Library at the Academy of Motion Picture Arts & Sciences

*Ten Thousand Waves / Better Life* (Isaac Julien, 2010)  
Composer, sound designer, mix consultant

*Faceless* (Manu Luksch, 2007)  
Cowriter, composer  
\*Collection Centre Georges Pompidou, BFI National Archive

*Unknown White Male* (Rupert Murray, 2005)  
Composer

*Virtual Borders* (Manu Luksch, 2003)  
Sound design, mix and mastering

## **Selected music and sound works for performance**

- 2019 *Spiral Pass* (orchestral version) - Le Ballet de l'Opéra de Lyon / chor. Maliphan
- 2016 *Lightspace* - installation with Michael Hulls for *No Body*, Sadler's Wells, London
- 2015 *Piece 43* - Russell Maliphan Company / Sadler's Wells, London
- 2015 *Kama Sutra* - BalletBoyz et al, dance for film, Sky Arts
- 2015 *both, and* - chor. Russell Maliphan / Sadler's Wells, London
- 2014 *Still/Current* - Russell Maliphan Company / Sadler's Wells, London
- 2014 *Spiral Pass* - Bayerisches Staatsballet, Munich chor. R. Maliphan
- 2011 *Clinic* - BalletBoyz, dance on film for *Random Acts*, Channel 4
- 2008 *Electric Counterpoint* chor. Christopher Wheeldon / Royal Opera House, London
- 2007 *Outside In* - Saju Hari, trio, Royal Opera House, London
- 2006 *Transmission* - Russell Maliphan Company, Sadler's Wells London
- 2004 *twelvetwentyone* - Le Ballet de l'Opéra de Lyon, chor. R. Maliphan
- 2004 *England Expects* for seven ghettoblaster & megaphone - Danish GhettoBlaster Ensemble, Trafalgar Square
- 2003 *Armadillo for your Show* - Oleg Kulik in the Turbine Hall, Tate Modern
- 2003 *Choice* - Russell Maliphan Company quintet, South Bank Centre London
- 2003 *Critics Choice*\*\*\*\*\* - BalletBoyz chor. Akram Khan, South Bank, London
- 2002 *The House* - Multiroom sound installations for Athina Vahla / Master Shipwright's Palace, London

## **Intermedia art**

(separate CV)