

# Dr Sunny Bains

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## Experience

### **Author of *Explaining the Future: How to Research, Analyze and Report on Emerging Computing Technologies***

Oxford University Press, 2019

This book provides engineers and physical scientists with the tools to think through matching new (and old) technologies, materials, and processes with applications: it covers which questions to ask, the resources needed to answer them, and can and can't be trusted. Then, it talks through analysing the information gathered in a systematic way and dealing with uncertainty. Next, there are chapters on tailoring writing to audience, making a persuasive and structured technical argument, and writing in a way that is credible and easy to follow. Finally, the book includes a case study: a real worked example that begins with an idea (related to neuromorphic engineering and photonics) and follows through the twists and turns of the research and analysis process to a final report. <http://explaining-the-future.com>

### **Founder/Editorial Director at UCL Engineering Inspiration: ENGins**

January 2014 - Present

Developed the idea of this part curated/part created news site for UCL Engineering from an experimental project called *The Briefing*. *ENGins* serves the academic and technical community in engineering and physical sciences by providing and tagging the best technical news from across the world so that users can select content (jobs, events, and books as well as articles) based on their own eclectic interests. <http://engins.org>

### **Principal Teaching Fellow at University College London**

September 2013 - Present

Designed the professional skills modules for the Integrated Engineering Programme at UCL Engineering, launched in 2014. The vision was to help students to change the world when they leave college by helping them develop into effective and influential professionals, not just competent technicians. Led the technical communication effort in particular, ensuring that all students received practice and feedback in both writing and presenting to an interdisciplinary audience. Also teach a course in Tech Journalism to undergraduate students and lead minor stream on Strategic Thinking in Engineering and Technology. <http://tiny.cc/sunny-bains-principal>

### **Founder/Managing Director at Form and Content Media Limited**

September 2005 - Present

The company's goal is to help scientists and engineers to communicate with each other, with colleagues, and with the general public. It achieves this by helping technical people to create readable, meaningful content: both for publication and for their colleagues and clients. Form and Content projects have received two Society of National Association Publications awards. Clients have included the International Society of Optics and Photonics (SPIE), The Institute of Neuromorphic Engineering, Imperial College, UCL, and the Society for Plastics Engineering. Among the various publications founded by Form and Content was *The Briefing*, later adopted by UCL Engineering. <http://fac-media.org>

### **Technical Communication Tutor at Imperial College London**

June 2001 - November 2013

Taught professional (particularly writing/argument) skills to undergraduates in Electrical and Electronic Engineering as well as to PhD/MSc students in the Graduate School of Engineering and Physical Sciences.

### **Science/Technology Journalist at Freelance**

December 1988 - May 2011

Specialized in optics and optoelectronics, robotics and machine perception, emerging computing technologies and imaging and displays and wrote for magazines including *The Economist*, *Science*, *New Scientist*, *EE Times*, *Laser Focus World*, and *Wired*. Also consulted for the European Commission Future and Emerging Technologies Programme, EPSRC (Engineering and Physical Sciences Research Council), Project Reason, and NESTA (National Endowment for Science, Technology and the Arts). <http://sunnybains.com>

## **Visiting Lecturer at University of California at Berkeley**

September 1999 - December 1999

Taught course on Writing for the Technical Press for the Faculty of Engineering.

## **News Editor at Laser Focus World Magazine**

September 1992 - April 1993

In charge of writing and editing news stories for the magazine. Also wrote features.

## **Technical Editor/Holography Technical Director at SPIE**

January 1991 - September 1992

Sold Holographics International to SPIE and continued it as a directory and a conference during time on staff here. Also founded a series of technical newsletters that lasted 14 years until they were replaced by SPIE Newsroom (serviced by Form and Content).

## **Editor/Publisher at Holographics International Magazine**

April 1987 - December 1990

Founded and edited this technical trade magazine about the holography industry, then sold it to SPIE.

## Education

**PhD Physical Computation and Embodied Artificial Intelligence**, The Open University, 2005

**MS Journalism**, Boston University, 1994

**BSc Physics**, Queen Mary University of London, 1990

## Organizations

**ABSW** (Association of British Science Writers, Executive Board)

**IEEE** (Institute of Electrical and Electronics Engineers, IEEE Professional Communication Society)

**NASW** (National Association of Science Writers, Governance Committee)

## Honors and Certifications

**UCL Provost's Teaching Award 2016: Leadership**

**Senior Fellowship of the HEA**, Higher Education Academy May 2016

## Selected Publications

[Neurophotronics: Photonics demonstrate brainlike behavior useful in machine learning](#)

**Laser Focus World**, 10 July 2017

[Questioning the integrity of the John Templeton Foundation](#)

**J. Evolutionary Psychology**, 3 March 2011

[Bionic brain chips could overcome paralysis](#)

**New Scientist**, 1 September 2009

[Research bots leverage open-source for child-like intelligence](#)

**Electronic Engineering Times**, 10 July 2008

[Mixed Feelings](#)

**Wired**, April 2007

[Catastrophic 'fuse' effect may be preventable and have practical uses](#)

**Laser Focus World**, March 2004

[Machines with a human touch](#)

**The Economist**, 22 September 2001

[Radiation pressure from evanescent wave measured](#)

**OE Reports**, October 2000

[Optoelectronics: Double helix doubles as engineer](#)

**Science**, 27 March 1998