

## 1 Personal details

**Summary** Interdisciplinary researcher with a background in innovation.<sup>1,2</sup> US Citizen with Indefinite Leave to Remain in the UK.

### Education

- PhD, Computing, The Open University. 2014.
- BA (Hons), Mathematics, New College of Florida. 2002.

### Positions

Open Research Project Manager, Oxford Brookes (since 1/2023)  
Director, Hyperreal Enterprises, Ltd. (since 6/2019)

**Experience** Research Fellow, Institute for Ethical AI, Oxford Brookes (10/2020-12/2022)  
Associate Lecturer, Engineering, Computing and Mathematics, Oxford Brookes (2021-2022)  
Hourly Paid Lecturer, Department of Digital Humanities, King's College London (2021-2022)  
Attended Entrepreneur First, a selective deep tech incubator programme (2020)  
Software Engineer (Clojure), Open Markets, developing a healthcare equipment marketplace (2019)  
Research Associate, "MathSoMac", School of Informatics, University of Edinburgh (2016-2019)  
Research Associate, "COINVENT", Computing, Goldsmiths, University of London (2014-2016)  
Research Assistant, "DECIPHER", Knowledge Media Institute, The Open University (2013)  
Editor in the Peeragogy Project, shaping a new learning paradigm (since 2012)  
Member of the Board of Directors of PlanetMath.org, which developed an early commons-based peer production platform to build a free/open online encyclopedia of mathematics (2005-2014)

**2 How have you contributed to the generation of knowledge?** Media scholar Howard Rheingold created a neologism to describe my doctoral research on "peer produced peer learning", i.e., *peeragogy*.<sup>3,4</sup> There are presently around 11,000 hits for that term on Google. My research publications focus on various aspects of collaborative knowledge production. I am currently applying my meta-research and project management skills in a large consortium project that aims to improve research practice across the sector.

**3 How have you contributed to the development of individuals?** As the Director of Hyperreal Enterprises, I've brought together a transdisciplinary research network for peer learning, co-coaching, and paid contract work.<sup>5</sup> In the Peeragogy project, I've facilitated dialogue and collaboration amongst researchers, entrepreneurs, educators, and innovators from around the globe.<sup>6,7</sup> I have supervised Master's theses in informatics, data science, and Digital Humanities, as well as two Google Summer of Code interns. I helped develop a new course, Data Science for Design, which taught applied research skills to Master's students, who deployed their real-world problem found via in-house "data fairs".<sup>8</sup>

<sup>1</sup>h-index = 18: <https://scholar.google.com/citations?user=A9YEB5YAAAAJ>; <https://orcid.org/0000-0003-1330-4698>.

<sup>2</sup>100% Open Access; top 41% by global reach: <https://profiles.impactstory.org/u/0000-0003-1330-4698/achievements>

<sup>3</sup><http://oro.open.ac.uk/40775/>

<sup>4</sup><https://clalliance.org/blog/toward-peeragogy/>

<sup>5</sup><https://github.com/exp2exp/exp2exp.github.io>

<sup>6</sup><https://groups.google.com/g/peeragogy?pli=1>

<sup>7</sup><https://piercepress.com/peeragogy-in-action>

<sup>8</sup><https://datafairs.github.io/>

**4 How have you contributed to the wider research community?** In the “Growing and Embedding Open Research in Institutional Practice and Culture”, a five-year programme funded by Research England, my contribution focuses on developing 180 new trainers across the sector using a “train the trainer” model. At Brookes, I also co-lead the AI and Data Analysis Network, with over 90 members. In previous postdoctoral projects, I organised research events on transdisciplinarity, creativity, and meta-research, e.g., “Enabling Mathematical Culture” at Oxford University,<sup>9</sup> and “Cybernetic Serendipity Reimagined” in connection with AISB 2018.<sup>10</sup> At the University of Edinburgh, I co-developed a new course, “Data Science for Design”, in which Master’s students gained capacities to carry out data-centric research projects.<sup>11</sup>

**5 How have you contributed to broader society?** Building on previous experience with large-scale collaboration in free/open online, my consultancy Hyperreal Enterprises has been developing new processes and tools for multi-stakeholder collaboration and community-driven research. Our initial application is to urban health, working with a client at the University of the West of England.

**6 Personal statement** To bring about change at the level and scale required in this critical time in human history will require far-reaching transdisciplinary inquiry and innovation in the processes of learning and adaptation. Technology is always only one part of the problem. New practices are needed to use technology effectively, and the institutions that shape these practices need to be understood and transformed.

**7 Additions** I enrolled in the mathematics department at the University of Texas in Austin for postgraduate study (2002-2004), but did not find the programme a good fit for my hands-on approach to learning. I left to pursue independent research in collaboration with the PlanetMath project (2005-2009).

### Selected publications

**Corneli, J.**, Murphy, A., Puzio, R. S., Vivier, L., Alhasan, N., Danoff, C. J., Bruno, V., & Pierce, C. (2022). Patterns of patterns: A methodological reflection on the future of design pattern methods. In S. Inayatullah, R. Mercer, I. Milojević, & J. A. Sweeney (Eds.), *CLA 3.0: Thirty Years of Transformative Research*. Tamkang University Press. <https://arxiv.org/abs/2107.10497>

Pease, A., Lawrence, J., Budzynska, K., **Corneli, J.**, & Reed, C. (2017). Lakatos-style collaborative mathematics through dialectical, structured and abstract argumentation. *Artificial Intelligence*, 246, 181–219. <http://www.sciencedirect.com/science/article/pii/S0004370217300267>

**Corneli, J.**, Martin, U., Murray-Rust, D., Pease, A., Puzio, R., & Rino Nesin, G. (2017). Modelling the way mathematics is actually done. In M. Sperber, J. Bresson, M. Santolucito, & A. McLean (Eds.), *2017 International Workshop on Functional Art, Music, Modelling and Design (FARM 2017)*. ACM. <https://dl.acm.org/citation.cfm?id=3122938.3122942>

**Corneli, J.**, Jordanous, A., Shepperd, R., Llano, M. T., Misztal, J., Colton, S., & Guckelsberger, C. (2015). Computational poetry workshop: Making sense of work in progress. In S. Colton, H. Toivonen, M. Cook, & D. Ventura (Eds.), *Proceedings of the Sixth International Conference on Computational Creativity, ICC3 2015*. <http://axon.cs.byu.edu/ICCC2015proceedings/13.1Corneli.pdf>

Kohlhase, M., **Corneli, J.**, David, C., Ginev, D., Jucovschi, C., Kohlhase, A., Lange, C., Matican, B., Mirea, S., & Zholudev, V. (2011). The planetary system: Web 3.0 & active documents for STEM [Special issue: Proceedings of the International Conference on Computational Science, ICCS 2011]. *Procedia Computer Science*, 4, 598–607. <http://www.sciencedirect.com/science/article/pii/S1877050911001219>

---

<sup>9</sup><https://enablingmaths.wordpress.com/>

<sup>10</sup><http://aisb2018.csc.liv.ac.uk/>

<sup>11</sup><http://www.drps.ed.ac.uk/17-18/dpt/cxdesi11100.htm>