

David Ryan Glowacki, BA, MA, PhD, URF, FRSC

David Ryan Glowacki (PhD, MA) is a research fellow of the Royal Society of London, which is the oldest scientific academy in the world. Glowacki is presently based at the University of Bristol (UK). His interests span science, technology, cultural theory, and digital art. He has won several awards and scholarships, and has published across a range of subjects, including classical and quantum dynamics, biochemistry, computer programming, atmospheric physics, scientific instrument development, optics, spectroscopy, religion and power, textual analysis, and digital art.

Glowacki's accomplishments to date include publications in high profile scientific journals like *Science* and *Nature* as well as publications in high-profile arts publications like *Leonardo*. He is regularly invited to deliver seminars and lectures across both science and art at top institutions across the world. Glowacki has a unique academic background: in addition to a PhD in chemical physics, he holds an MA in cultural theory, which he obtained as a Fulbright scholarship finalist in 2004. Inspired by his scientific work, Glowacki is interested in making interactive artworks that offer people experiences of the invisible physical realities in which they are embedded, but which are invisible and therefore difficult to imagine otherwise. His interactive art projects *danceroom Spectroscopy* and *Hidden Fields* have been experienced by over 200,000 people worldwide (for more information, see www.danceroom-spec.com). This CV focuses primarily on Glowacki's artistic work. A detailed list of his scientific credentials is available on his website www.glow-wacky.com

PERSONAL DETAILS

Name:	David Ryan Glowacki	Date of birth:	9 July 1981
URL:	www.glow-wacky.com	Nationality:	USA/UK

EDUCATION

2004 – 2008	PhD in Physical Chemistry at the University of Leeds, UK
2003 – 2004	Master Of Arts in Cultural Theory at the University of Manchester, UK
1999 – 2003	BA (<i>summa cum laude</i>) at the University of Pennsylvania, USA

PROFESSIONAL APPOINTMENTS

2014 – now	Professor, Dept of Computer Science, University of Bristol (UK)
2013 – now	Professor, Department of Chemistry, University of Bristol (UK)
2013 – now	Royal Society University Research Fellow (UK)
2014 – 2015	Adjunct Faculty & MFA Supervisor, California College of Contemporary Art (SF, USA)
2013 – 2015	Visiting Professor, Stanford University (USA)
2009 – 2013	Postdoctoral Research Associate at the University of Bristol (UK)
2008 – 2009	Postdoctoral Research Associate at the University of Leeds (UK)

MAJOR AWARDS

2014	Named as Fellow of the Royal Society of Chemistry (FRSC)
2014	Harrison-Meldola Memorial Prize for “theoretical work on energy transfer process in chemical reaction dynamics.” This Prize is made to scientists aged 32 or under for “the most meritorious and promising original investigations in chemistry and published results of those investigations.” Each year, no more than one of these awards goes to a chemist working in the area of chemical physics or theoretical chemistry
2013	Royal Society of London University Research Fellow (URF). The URF award is extremely competitive. Approximately 30 are awarded each year across <i>all fields of science</i> , and the application success rate is typically 5 – 7%, with very few going to chemists. The URF is effectively a grant of \$1.5mil USD that pays salary and research expenses for up to eight years, and affords a tremendous amount of scientific and intellectual freedom.

SCHOLARSHIPS AND ACADEMIC AWARDS

2013	Attendee at the Lindau Nobel Laureates Meeting (success rate ~2%)
2007	J.B. Cohen Award for PhD thesis representing ‘ <i>a substantial contribution to human knowledge</i> ’, University of Leeds (UK)
2006	British Council Award to attend ‘the young scientist’s forum on climate change’
2004 – 2007	Overseas Research Studentship to support PhD research at the University of Leeds
2004 – 2007	Tetley/Lupton PhD Scholarship to support PhD research at the University of Leeds (UK)
2004	Arts, Histories, and Culture Award for best MA dissertation (University of Manchester, UK)
2003	Fulbright Scholarship finalist for MA study at the University of Manchester (UK)
2002 – 2003	Distinguished tutor awards (University of Pennsylvania, 2002 – 2003)

ARTS GRANTS

2014 – 2015	Stanford Arts Institute Grant (Sculpting Dynamics Using Human Energy Fields, \$10k)
2011 – now	New Talent Award @Bristol Pervasive Media Studio digital research lab (£6k/year)
2013 – 2014	Arts Council England Grants for the Arts Award (<i>Hidden Fields</i> , £120k)
2013	Royal Society of Chemistry Grant for Digital Aesthetics R&D (£25k)
2013	Watershed Digital Media Centre Grant for Digital Aesthetics R&D (£25k)
2013	EPSRC Grant for Digital Aesthetics R&D (£10k)
2013	Bristol University Grant for Digital Aesthetics R&D (£10k)
2013	NVIDIA Academic Partnership Award (<i>Sculpting Dynamics Using Human Energy Fields</i> , £10k)
2010	UK EPSRC award for digital art (<i>Sculpting Dynamics Using Human Energy Fields</i> , £20k)

ARTS COLLABORATIONS

2014 - 2015	Prof Joseph Hyde (Bath Spa University) <i>Molecular Music</i> , a ‘Seeing Sound’ audiovisual performance <i>Cloud Chamber</i> , a ‘Seeing Sound’ audiovisual performance
2014	Prof Camille Utterback (Stanford) Dr. Michael St. Clair (Stanford) Melissa Helena Kauffman-Gomez (Columbia University) <i>Dances of the Sacred and Profane</i> , a digital dance performance
2012 – 2015	choreographers Lisa May Thomas and Laila Diallo, contemporary dancers Isabelle Cressy, Miyako Asano, Tomomi Kosano, Emma Harrie <i>Hidden Fields</i> , an interactive generative digital dance performance
2011 – 2015	digital artist Phill Tew (Bristol Pervasive Media Studio) audio technologist Dr. Tom Mitchell (UWE, Bristol) <i>danceroom Spectroscopy</i> , an interactive digital art installation

AWARDS

2014 – 2015	Stanford University artist/scholar
2014	UK National Science Engagement Award (230 entries; 3.5% selection rate)
2013	UK Innovation Award for <i>Outstanding Contribution to Innovation</i> (over 100 entries, 1% selection rate)
2013	UK Media Innovation Award for <i>Best Performance/Installation/Live Event</i> (over 20 entries, 5% selection rate)
2013	Prix Ars Electronica (Austria); Honorary Mention in <i>Hybrid Art Category</i> (3500 entries; 2.1% selection rate)
2013	UK Royal Television Society Award for <i>Best Digital Innovation</i> (over 20 entries; 5% success)

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- 2013 Attendee at the Lindau Nobel Laureate Meeting (2.5% selection rate)
- 2013 University of Bristol Science/Art Engagement Award for ‘cross-disciplinarity’ and reaching audiences ‘who traditionally can be difficult to engage’

OTHER ACCOMPLISHMENTS

- Over 50 invited and contributed international oral presentations across science and digital art in both academic and non academic settings
- Author of over 50 peer-reviewed papers, spanning subject areas as diverse as classical and quantum physics, biochemistry, computer programming, atmospheric chemistry, scientific instrument development, optics, spectroscopy, religion & power, cultural theory, and artistic uses of digital technology; for a full list of publications see www.glow-wacky.com/publications

ARTISTIC EXPOSURE (SELECTED)

- 2015 (Sept) École Polytechnique Fédérale de Lausanne, *Hidden Fields*, Lausanne (Switzerland)
- 2015 (Jun) Gordon Craig Theatre, *Hidden Fields*, Stevenage (UK)
- 2015 (Mar) Z-Space, *Hidden Fields*, San Francisco (CA, USA)
- 2015 (Mar) Stanford Art Gallery, *Hidden Fields*, Stanford University (CA, USA)
- 2015 (Feb) Bhutan International festival, *danceroom Spectroscopy* public installation invited by the Bhutanese Royal Family, Thimphu (Bhutan)
- 2014 (Sept) Stanford Art Gallery, *danceroom Spectroscopy* public art installation, Stanford University (USA)
- 2014 (Aug) Salzburg International Festival, *Hidden Fields* (invited as part of the Roche Continents Art-Science Programme), Salzburg (Austria)
- 2014 (Jul) Bristol Proms, *Hidden Fields*, Bristol Old Vic Theatre, Bristol (UK)
- 2014 (Apr) Digital Dance Festival, *Hidden Fields public workshop*, University of Bedford (UK)
- 2014 (May) Leonardo Arts & Science festival, *danceroom Spectroscopy* public installation, San Jose (CA, USA)
- 2014 (Mar) Barbican Arts Centre; *danceroom Spectroscopy* public installation and *Hidden Fields* performance, London (UK)
- 2014 (Jan) SoundImageSound festival, University of the Pacific, *Molecular Music*, Stockton (CA, USA)
- 2014 (Jan) ZKM | Centre for Art and Media Technology, *danceroom Spectroscopy* public installation and *Hidden Fields* performance, Karlsruhe (Germany)
- 2013 (Nov) Waterman’s Theatre, *Hidden Fields* performance, London (UK)
- 2013 (Nov) Bath Spa University, ‘Seeing Sound Festival’, *Hidden Fields* performance, Bath (UK)
- 2013 (Oct) Passenger shed, ‘dSFest 360’ *danceroom Spectroscopy* public installation and *Hidden Fields* performance, Bristol (UK)
- 2013 (Jul) Bristol Proms, The Old Vic Theatre, *danceroom Spectroscopy* installation in collaboration with violinist Nicola Bendetti, Bristol (UK)
- 2013 (Jun) World Science Festival, *danceroom Spectroscopy* installation, New York City (NY, USA)
- 2013 (Mar) Big Bang Fair, *danceroom Spectroscopy* installation, London (UK)
- 2013 (Feb) Kinetica Art Fair, *danceroom Spectroscopy* installation, London (UK)
- 2012 (Nov) Barbican Arts Centre, *danceroom Spectroscopy* public installation and *Hidden Fields* performance, London (UK)
- 2012 (Aug) London 2012 Olympics, *danceroom Spectroscopy* public installation and *Hidden Fields* performance, London (UK)
- 2012 (Jul) Arnolfini Art Gallery, *danceroom Spectroscopy* public installation and *Hidden Fields* performance, (Bristol) UK

- 2012 (Jun) Arnolfini Art Gallery, residency to develop the *Hidden Fields* performance, Bristol (UK)
- 2011 (Aug) Shambala Arts Festival, *danceroom Spectroscopy* public installation, Northhamptonshire (UK)
- 2011 (Aug) Arnolfini Art Gallery, *danceroom Spectroscopy* public installation, Bristol (UK)
- 2011 (Jun) Arnolfini Art Gallery, residency to develop the *danceroom Spectroscopy* installation, Bristol (UK)
- 2011 (May) Sonar Festival, *danceroom Spectroscopy* public installation, Barcelona (Spain)
- 2011 (Mar) Changing Perspectives Arts/Science Festival, *danceroom Spectroscopy* public installation, Bristol (UK)

ARTISTIC PUBLICATIONS (SELECTED)

- 2014 J. Hyde, T. Mitchell, and D.R. Glowacki, “Molecular Music: repurposing a mixed quantum-classical model as an audiovisual instrument”, in the [Proceedings of the 17th International Generative Art Conference, \(GENArt 2014, Roma, Italia\)](#)
- 2014 T. Mitchell, J. Hyde, P. Tew, and D. R. Glowacki, “danceroom Spectroscopy: at the frontiers of physics, performance, interactive art, and technology,” [Leonardo \(MIT Press\)](#)
- 2014 D.R. Glowacki et al., “An immersive and interactive audiovisual framework for classical and quantum molecular dynamics using commodity depth sensors,” *Faraday Discussion vol 169*
- 2013 D. R. Glowacki et al., “Sculpting molecular dynamics in real-time using human energy fields,” in [Molecular Aesthetics](#), ISBN: 9780262018784 (MIT Press), ed. Prof. Dr. Peter Weibel
- 2012 D. R. Glowacki et al., “danceroom Spectroscopy: Interactive quantum molecular dynamics accelerated on GPU architectures using OpenCL,” [UK Many Core Development Conference 2012 \(UKMAC '12\)](#)
- 2012 D. R. Glowacki, “Escaping the Uncanny Valley of Virtual Reality”, commissioned article by Qualcomm Spark (spark.qualcomm.com/salon/escaping-uncanny-valley)
- 2012 D. R. Glowacki, “The ¿Qué onda? Moment”, invited article www.arnolfini.org.uk/blog/2012/07/05/the-¿que-onda-moment/
- 2011 D. R. Glowacki, *The Fist of a Bum Called god*, 2011 (novel)
- 2010 D. R. Glowacki, “All things to all people: unraveling the structure of the apostolic Panopticon” [Journal of Cultural and Religious Theory](#), 11(1), Winter 2010
- 2008 D. R. Glowacki, “To the Reader: the structure of power in biblical translation, from Tyndale to the NRSV,” [Journal of Literature and Theology](#), 2008, 22(2), p 210

ORAL PRESENTATIONS & PUBLIC LECTURES (SELECTED)

- 2015 (Mar) Z-Space Art Salon, *Modeling Humans as Energy Fields*, San Francisco (CA, USA)
- 2014 (Oct) UC Santa Cruz Leonardo Art-Science Rendezvous, *Modeling Humans as Energy Fields*, Santa Cruz (CA, USA)
- 2014 (Oct) Stanford University Human-Computer-Interaction Seminar, *Using Human Energy Fields to Sculpt Molecular Dynamics*, Stanford University (CA, USA)
- 2014 (Sept) Stanford Photonics Research Conference, *A GPU-accelerated immersive audiovisual framework for interaction with molecular dynamics using depth sensors*, Stanford University (CA, USA)
- 2014 (Sept) Stanford Art Gallery, *Modeling Humans as Energy Fields*, Stanford University (CA, USA)
- 2014 (Aug) Keynote speaker, Roche Continents, hosted by Hoffman-LaRoche Ltd., Salzburg (Austria)
- 2014 (Jul) UCSF Leonardo Art-Science Rendezvous, *Modeling Humans as Energy Fields*, San Francisco (CA, USA)
- 2014 (Mar) University of Nottingham, *A GPU-accelerated immersive audiovisual framework for interaction with molecular dynamics using depth sensors*, Nottingham (UK)
- 2014 (Jan) Centre for Computer Research in Music and Acoustics, *Using Human Energy Fields to Sculpt Audiovisual Dynamics*, Stanford University (CA, USA)
- 2014 (Apr) Invited Lecture, Department of Theatre and Performance Studies, *Using Human Energy Fields to Sculpt Audiovisual Dynamics*, Stanford University (CA, USA)
- 2014 (Jan) Invited Lecture, Columbia University, Curiosity³ series on science & Art, *Breathing narrative life into dynamics*, New York City (NY, USA)

- 2013 (Apr) Invited Speaker, RENKEI UK/Japan Meeting, *danceroom Spectroscopy: Using Human Energy Fields to Sculpt Molecular Dynamics*, Bristol (UK)
- 2013 (Apr) Invited speaker, Crucible Southwest Innovation & Creativity Meeting, *danceroom Spectroscopy: Using Human Energy Fields to Sculpt Dynamics*, Bath (UK)
- 2012 (Nov) Invited seminar, University of Santiago de Compostela, *danceroom Spectroscopy: Interactive performance art driven by algorithms from quantum dynamics*, Santiago de Compostela (Spain)
- 2012 (Sept) Invited Engage! Seminar, *danceroom Spectroscopy and Hidden Fields*, Bristol (UK)
- 2012 (Mar) Invited presentation, South by Southwest interactive festival, *Combining physics with dance to make performance art*, Austin (TX, USA)
- 2011 (Dec) Invited lecture, Arnolfini art gallery, *danceroom Spectroscopy: path integral quantum mechanics meets interactive art*, Bristol (UK)
- 2011 (Oct) Invited lecture, TEDx Bristol, *danceroom Spectroscopy*, Bristol (UK)