Full Name George Keith Still

Orchid House 26 Morewood Drive Burton-in-Kendal Cumbria, UK LA6 1NE

Qualifications 1981 Bachelor of Science (BSc) Physical Sciences

2000 PhD Interdisciplinary Maths/Psychology - Crowd Dynamics.2007 Fellowship IMA (Institute of Mathematics and its applications)2007 G4S Professorial Chair in Crowd Sciences (Bucks New University)

2012 Fellowship ICPEM (Institute of Civil Protection and Emergency Management) 2014 Specialist Fellowship of the International Institute of Risk and Safety

Management

2014 Professorial Chair in Crowd Sciences (Manchester Metropolitan University)

2015 Member of the Expert Witness Institute 2015 Fellow of the Institute of Place Management

Nationality British

## **Professional Experience**

Prof. Still has 25 years of experience in crowd safety. He works around the world advising on crowd safety and crowd risk analysis. He has lectured at Easingwold, the UK Cabinet Office Emergency Planning College, on human factors and safety considerations to the events industry for 15 years, been a special advisor to the Ministry of Hajj (Saudi Arabia) for 10 years, and is currently the Professor of Crowd Science, Manchester Metropolitan University, UK.

## **Project Experience**

**Sports Events:** London Olympic 2012 Bid, Twickenham Stadium, UK, Beijing Olympic Stadium, Sydney Olympics, Swedbank Arena Project, Sweden, Commonwealth Games (UK), Millennium Stadium, Wembley National Stadium, Hong Kong Jockey Club, UK Premier League Analysis of persistent standing risk analysis, Penn Stadium (USA), Everton FC, Manchester City FC, Edgbaston Stadium, London Olympics

**Religious Festivals:** Jamarat Bridge, Saudi Arabia (2000 - 2005), Al-Haram, Saudi Arabia (2008 - 2011), Al Mashaaer Al Mugaddassah Metro Project bid Saudi Arabia, Diwali, Leicester

**Events:** Royal Wedding 2011, MCFC and MUFC Victory Parades, Leicester Caribbean Carnival, Glastonbury Music Festival, UK, Hampton Court Flower Show, Great Manchester Run, London New Year Festival, Aberdeen Hogmanay, Mathew Street Festival (Liverpool), Gerrard Street Leg of the Olympic Torch Relay London Gold Standard Modelling, London Olympics, Penn Stadium (Nabraska v Penn State), Birmingham Christmas Market, Dubai New Year

**Rail:** Cubic Transportation Ltd, Easingwold (LuL, BTP, various station managers), London Olympic 2012 bid, Dwell Modelling - Alstom, Porterbrook, Bombardier, Wembley National Stadium, UK Complex Station (Marshalling Study), Chesterfield Railway Station, UK, Covent Garden Ticket Hall Retail Analysis, London Olympics, Dubai Mall

**Leisure:** Conference Centre Aquarium, Kuala Lumpur, Cleethorpes Outdoor Arena Development, UK, Manchester Museum, UK, Liverpool Arena and Conference Centre, Penn Stadium (USA), Bluewater Mall, Westfield (Olympic Gateway), Dubai Mall

**Evacuation:** Canary Wharf business district, London UK, Chelsea Flower Show, UK, Labour Party Conferences, UK, Manchester Sport City, UK, Swedbank Arena Concourses, Sweden, AWE Aldermaston (Public Enquiry), Bluewater shopping mall, Westfield (Olympics gateway)

#### **Publications:**

- Still G. K. New Computer system can predict human behaviour response to building fires. Fire 84 (January 1993), 40-41
- Still G. K. Towering Inferno New Scientist (Supplement April 1993).
- Still G. K. New Insights into Crowd Behaviour It's Fractal. Focus November (1994).
- Still G. K. Simulating Egress using Virtual Reality a perspective view of simulation and design. IMAS Fire Safety on Ships symposium (May 1994).
- Still G. K. The Secret Life of crowds. Focus (June 1996)
- Still G. K. Last word, mind the gap. New Scientist (March 20th 1999).

Reynolds, L. Fielden, I, Still, G. K, Stewart, I. "Wirequakes - a question of seismology" with Len Reynolds and Ian Stewart - a paper comparing earth and wire quakes (Wire Industry, December 1999).

- Still G. K. Crowd Dynamics. PhD Thesis, Mathematics department, Warwick University. (August 2000)
- Still G. K. Optimising Office Egress. Web based publication (Sept 2001)
- Still G. K. "Agincourt" Chapter in book "Battlefield Detectives" ISBN 0-233-05083-3
- Still G. K. "Review of Pedestrian and Evacuation Simulation" Critical Infrastructures 2007
- Still G. K. "The Biomechanics of Fatal Compression Asphyxia" Journal of Forensic Science (submitted)
- Still G. K. "Following the crowd" article for the 50<sup>th</sup> Edition of Mathematics Today
- Still G. K. "Introduction to Crowd Science" Taylor Francis (book)

# **News reports and TV items:**

Physics Education vol 15 1980. 'A versatile nodal slide.' (Patented nodal slide/optical bench. Pat. No. 7351593). Articles written for Health and Safety ('The Lemming Factor' Dec 92) and Fire ('New computer system can predict human behavioural response to building fires' Jan 93). VEgAS featured on ITN (Nov 92) and Tomorrows World (Jan 93 and Feb 95). Articles in New Scientist (Nov 92 and April 93 "Lessons from the Inferno" Two pages in the supplement), the TIMES (Nov 92), Beyond 2000 (Jul 93, August 1996), Personal Computer World (Oct 94). Focus Magazine (Nov 94, Mar 96). Cover Disk Personal Computer Word (Dec 94, Jun 96). European Business News (Jul 95, Nov 95, Mar 96, Aug 96) for Crowd Modelling, Business Process Re-Engineering VR models, Fractal Compression and Predicting the money markets. New Scientist (Feb 96) Rock fans go with the Flow, Economist (April 12th - Fractal Futures), Personal Computer World (June 1996) Cover Disk. Sunday Times (front page editorial - 7th July 1996). Scientific American (with Ian Stewart - March 1996), Crowd Modelling (Radio 4 April 98). Discovery Channel (World of Wonder - April 98). Also featured in a chapter of Ian Stewart's latest best selling book (Life's Other Secret). "Wirequakes - a question of seismology" with Len Reynolds and Ian Stewart - a paper comparing earth and wire quakes (Wire Industry, December 1999). Various Sydney Olympics news and broadcasts (1999 through 2000). Nature July 5th Volume 412 article on Starlab. 2001 Open University programme - Crowd Dynamics. November 2002 - Channel 5 documentary on "Battlefield Detectives" (shown July 2003). Building the Ultimate Stadium and Battlefield **Detectives-Gettysburg** shown on the **History Channel** around the world. Testimony at the USA

House Committee (9th June) for the evacuation of the the Capitol Buildings (May 11th). "Understanding Crowd Dynamics". Article in the *Main Event* (Nov 2005). Numerous Radio and TV appearances relating to Crowd Safety (2005) following the Jamarat Tragedy. National Geographic TV "Escape Tech" (10th April 2006). Technical consultant on an episode of "Numb3rs" (CBS TV programme). Emergent Systems - TV programme for NOVA (just completed filming Nov 2006). IJCIS "Review of Crowd Simulations". Published Nov 2006. Jan 2009 TV programmes – Overcrowding on UK trains, Articles in Focus magazine, Dubai News, USA Time Magazine and various other TV/News and media programmes relating to the current state of over crowding on public transport in the UK. 2009 ACPO Magazine, Mensa Magazine, ISquared Magazine, Secure London and Emergency Services Show. 2010 – connect (Safety in Numbers). The Human Swarm (Channel 4 - 12<sup>th</sup> June 2013), Crowd Control (BBC documentary) Jan 2014, Mathematics Today (50<sup>th</sup> Anniversary edition) article on "following the crowd". Feb 2014. Article on Crowd Risk Assessment for the ICSS (to be published 2014), The One Show (broadcast 2014), Article on emergency evacuation for City Security (Mar 2014), BBC "Math of the Day (My 2015). Following the Hajj disaster (2015) international commentary by Prof Still on the causes of the disaster.

## **Expert witness cases**

- Clear Channel (Night Club Overcrowding) Expert report and court attendance
- London Underground (Personal Injury) Expert report and analysis
- Senate House Committee USA (Live TV broadcast Testimony)
- New York State USA (Personal Injury) Expert witness, Supreme court appearance
- Love Parade (Mass Fatalities on-going) Expert report and analysis
- Lava and Ignite (Fatalities on-going) Expert report and analysis
- Birmingham City Council JLS (Personal Injury on-going) Expert report and analysis
- Rage Against the Machine (Personal Injury on-going) Expert report and analysis
- Hillsborough Inquiry (on-going) Expert report and analysis
- Chicago personal injury (on-going) Expert report and analysis