

CURRICULUM VITAE: Dr. Mike Goldsmith

Born London, 12th July 1962

Background

1980 - 1984 Degree in physics and philosophy (2.1) at Keele University, specialising in space, time and relativity in both subjects

1984 - 1987 Ph D in astrophysics at Keele University, specialising in variable stars and cosmic dust

1987 - 2007 Head of Acoustics and other roles at National Physical Laboratory. Scientific work included research on noise, speech, language, sound and artificially-intelligent machinery.

Current Freelance research scientist and science writer, recent research projects include environmental noise real-time noise mapping, novel microphones, MicroElectroMechanical Systems, underwater sound, soundscapes.

Areas of Interest (science research and management)

- Acoustics, especially environmental noise
- Astronomy, especially variable stars and cosmic dust
- Science project management

Areas of interest (writing)

- Acoustics
- Astronomy and space exploration
- Biology and life science
- Chemistry
- Einstein and relativity
- History of science
- History of science fiction
- Inventions and technology
- Mathematics
- Measurement
- Noise
- Physics
- Robotics
- Scientific biography
- Time and time-travel

Publications (non-fiction books)

The Science Museum Book of Amazing Facts: Time (Hodder, 1999)

Spinning Through Space: Space Travel (Hodder Wayland, 2000)

Spinning Through Space: Space Mysteries (Hodder Wayland, 2000)

Neil Armstrong: First Man on the Moon (Hodder Wayland, 2001)

Scientists Who Made History: Galileo (Hodder Wayland, 2001)

Dead Famous: Albert Einstein and his Inflatable Universe (Scholastic, 2001) [plus 10 foreign editions]; shortlisted for Aventis prize 2002; revised edition published 2010 as Horribly

Famous: Albert Einstein and his Inflatable Universe

Scientists Who Made History: Guglielmo Marconi (Hodder Wayland, 2002)

Scientists Who Made History: John Logie Baird (Hodder Wayland, 2002)

Dead Famous Inventors and their Bright Ideas (Scholastic, 2002) [plus 6 foreign editions] ; revised edition published 2010 as Horribly Famous Inventors and their Bright Ideas

The Knowledge: Riotous Robots (Scholastic, 2003) [plus 3 foreign editions]; shortlisted for Aventis prize 2004 ; revised edition published 2009 as Totally Riotous Robots

Dead Famous Scientists and their Mind-Blowing Experiments (Scholastic, 2003) [plus 6 foreign editions]; revised edition published 2009 as Horribly Famous: Charles Darwin and other Seriously Super Scientists

The Knowledge: Fantastic Future (Scholastic, 2004)

Kingfisher Young Knowledge: Solar System (Kingfisher, 2004) [plus 1 foreign edition]

Voyager: Space (Kingfisher, 2005) [plus 1 foreign edition]

Kingfisher Young Knowledge: Light and Sound (Kingfisher, 2007) [plus 1 foreign edition]

Navigators: Stars and Planets (Kingfisher, October 2008) [plus 2 foreign editions]

Explore Encyclopedia (Kingfisher, October 2008) [co-author; plus 1 foreign edition]

Everything You Need to Know About Science (Kingfisher, 2009)

Ripley Twists: Space (Ripley Publishing, 2009)

Let's Find Out About Weather (TickTock, 2009)

Let's Find Out About My Body (TickTock, 2009)

Let's Find Out About Recycling (TickTock, 2009)

I Wonder Why: Flip the Flaps: The Weather (Kingfisher, 2010)

I Wonder Why: Flip the Flaps: Planet Earth (Kingfisher, 2010)

Science Detectives (Oxford University Press, 2010)

I Wish I Knew That... Cool Stuff You Need to Know (Buster Books, 2010) [co-author]

A Beginner's Guide to Measurement (National Physical Laboratory, 2010)

Big ideas that Changed the World (Dorling Kindersley, 2010) [co-author]

Exploring Space Q & A (Dorling Kindersley, 2011)

Eyewitness Computer (Dorling Kindersley, 2011)

Zoom (Dorling Kindersley, 2011) [co-author]

Earth, the life of a planet (Kingfisher, 2011)

From Zero To Infinity and Beyond (Buster Books 2011)

Kingfisher Space Encyclopedia (Kingfisher, 2011)

Legendary Journeys: Space (Quarto, 2011)

Snot Collectors, Spider Ladders and Other Bonkers Inventions (Scholastic, 2012)

Train your Brain to Be a Maths Genius (Dorling Kindersley, 2012)

Discord: the story of noise (Oxford University Press, 2012)

Also consultant on a wide range of titles.

Publications (papers and reports)

"PW Vulpeculae and RS Ophiuchi", JS Albinson, MF Bode, A Evans & MJ Goldsmith; **International Astronomical Union Circular** No 4091; 1986.

"Deep Minima in R Coronae Borealis Stars"; MJ Goldsmith & A Evans; **Irish Astronomical Journal**; 17; No 3; March 1986.

"Optical and Infrared Observations of RV Tauri Stars", MJ Goldsmith, A Evans, JS Albinson & MF Bode; **Monthly Notices of the Royal Astronomical Society**; 1987.

"Optical and Infrared Observations of Southern RV Tauri Stars", MJ Goldsmith, A Evans, JS Albinson & MF Bode; 1987; IAU Symposium No. 122.

"Simultaneous Optical and Infrared Observations of RV Tauri Stars", MJ Goldsmith, A Evans, JS Albinson & MF Bode; in "Stellar Pulsations: A Memorial to JP Cox"; AN Cox & W Sparks (eds); 1987.

"A Study of R Coronae Borealis and RV Tauri Stars", MJ Goldsmith, Ph D Thesis, 1987.

"Thermionic effect in circumstellar dust" MJ Goldsmith, A Evans, **Conference on Dust in the Universe**, ME Bailey and DA Williams (eds.), p. 547, 1988.

"Speech Databases for UK Speech Technology Research: A Survey of Resources and Future Needs"; MJ Goldsmith; National Physical Laboratory External Report RSA(EXT)010; 1989.

"The Effective Temperatures of RCB Stars" MJ Goldsmith, A Evans, JS Albinson & MF Bode; **Monthly Notices of the Royal Astronomical Society**; 245; pp 119-129; 1990.

"Larynx Analyses of Normative Reference Data"; WJ Barry, MJ Goldsmith, AJ Fourcin & HC Fuller; Alvey Speech Technology Assessment Project Report; June 1990.

"Stability of Laryngeal Measures in Speech"; WJ Barry, MJ Goldsmith, AJ Fourcin & HC Fuller; Alvey Speech Technology Assessment Project Report; August 1990.

"A Database of Normative Speech Recordings"; HC Fuller, AJ Fourcin, MJ Goldsmith & M Keene; **Proceedings of the Institute of Acoustics**; 12; 1990.

"Stability of Average Laryngeal Frequency in Speech"; WJ Barry, MJ Goldsmith AJ Fourcin & HC Fuller; **Proceedings of the Institute of Acoustics**; 12; 1990.

"Effect of Whole-Body Vibration on Speech"; MJ Goldsmith & MR Taylor; in **Proceedings of the Institute of Acoustics**; 12; 1990.

"Stability of Voice Frequency Measures in Speech"; WJ Barry, MJ Goldsmith, AJ Fourcin & HC Fuller; in Proceedings of 12th International Congress of Phonetic Sciences; Aix en Provence, 1991.

"Final Report of Alvey Man-Machine Interface Project MMI/132: Speech Technology Assessment", MJ Goldsmith & HC Fuller; National Physical Laboratory External Report RSA(EXT)26; November 1991.

"Multiwavelength observations of RV Tauri stars. I - AC Herculis"; Shenton, M.; Albinson, J. S.; Barrett, P.; Davies, J. K.; Evans, A.; Goldsmith, M. J.; Hutchinson, M. G.; Maddison, R. C.; Weight, A.; **Astronomy and Astrophysics**, vol. 262, no. 1, p. 138-152; August 1992

"The reddening and variability of XX Ophiuchi"; Evans, A.; Albinson, J. S.; Barrett, P.; Davies, J. K.; Goldsmith, M. J.; Hutchinson, M. G.; Maddison, R. C.; **Astronomy and Astrophysics** , vol. 267, no. 1, p. 161-167; January 1993

"Photometry and polarimetry of pre-main sequence stars"; Hutchinson, M. G.; Albinson, J. S.; Barrett, P.; Davies, J. K.; Evans, A.; Goldsmith, M. J.; Maddison, R. C. ; **Astronomy and Astrophysics** vol. 285, p. 883-896 (1994) ; May 1994

"Multiwavelength observations of RV Tauri stars. 4: SX Centauri"; Shenton, M.; Evans, A.; Albinson, J. S.; Barrett, P.; Davies, J. K.; Goldsmith, M. J.; Hutchinson, M. G.; Laney, D.; Maddison, R. C.; **Astronomy and Astrophysics**, vol. 292, no. 1, p. 102-114 ; December 1994

"Mass Programme 1996-99 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 2; October 1997.

"Acoustical Metrology Programme 1995-98 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 5; October 1997.

"The Acoustical Metrology Programme 1995-1998" (guidance brochure); July 1998.

"Mass Programme 1996-99 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 17; October 1998.

"Acoustical Metrology Programme 1995-98 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 19; October 1998.

"Mass Programme 1996-99 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 17; December 1999.

"Acoustical Metrology Programme 1998-2001 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 19; October 1999.

"The Mechanical Metrology Programme 1999-2002" (guidance brochure); January 2000.

"Mass Programme 1999-2002 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 24; October 2000.

"Acoustical Metrology Programme 1998-2001 Annual Report"; MJ Goldsmith (editor); NPL Report CMAM(RES) 31; October 2000

"Acoustical Metrology Programme 1998-2001 Annual and Final Report"; MJ Goldsmith (editor); October 2001

"Acoustical Metrology Programme 2001-2004 Annual Report"; MJ Goldsmith (editor) October 2002

"Acoustical Metrology Programme 2001-2004 Annual Report"; MJ Goldsmith (editor) October 2003

"Acoustical Metrology Programme 2001-2004 Annual and Final Report"; MJ Goldsmith (editor) December 2004

"Acoustical Metrology Programme 2004-2007 Annual Report"; MJ Goldsmith (editor) October 2005.

"Acoustical Metrology Programme 2004-2007 Annual Report"; MJ Goldsmith & B Zeqiri (editors) January 2007

"The application of the National Physical Laboratory laser pistonphone to the international comparison of measurement microphones"; Richard Barham & Mike Goldsmith; **Metrologia**; vol 44, p 210-216, 2007

"Performance of a MEMS-based measurement microphone", NPL Report AIR (RES) 003, Richard Barham, Firas Farhan, Mike Goldsmith, Richard Lord, December 2007

"A new equation for the accurate calculation of sound speed in all oceans", Claude Leroy, Stephen Robinson, Mike Goldsmith, **Journal of the Acoustical Society of America**, Volume 124 part 5, pp 2774-2782, November 2008

"Comparison of different measurement instruments for the study of complex industrial noise fields", Mike Goldsmith, Tony Shepperson, John Shelton, Dan Simmons, Pete Theobald, Graham Beamiss, **Institute of Acoustics Bulletin**, December 2008

"A MEMS-based system for environmental measurement, monitoring and mapping", Mike Goldsmith & Richard Barham, Proceedings of Symposium: *European Strategies for Noise Reduction and Management in the Cities*, March 2009

"Development and performance of a multi-point distributed environmental noise measurement system using MEMS microphones", Richard Barham, Mike Goldsmith, Dan Simmons, Martin Chan, Lee Trowsdale, Simon Bull, Richard Tyler, Proceedings of Conference: *EURONOISE 2009*, October 2009

Prizes

Institute of Physics/National Physical Laboratory Science Writing Competition 1992 for essay "A Listening Machine?"

Institute of Physics/National Physical Laboratory Science Writing Competition 1993 for essay "Thinking Machines"

Junior Aventis Science Prize 2002 (shortlisted)

Junior Aventis Science Prize 2004 (shortlisted)