

Biography of Dr. Antonio Medina



Antonio Medina circa 1988 demonstrating how shadows induce levitation perception. That year he discovered the phenomenon of Shadow Stereopsis. Reproduced from NASA AM archives.

Fields Engineering, Optics, Physics, Physiology, Ophthalmology, Psychophysics

Institutions Universidad Politécnica de Madrid, Spain
Universidad Complutense de Madrid, Spain
University of Cambridge, England
Massachusetts Institute of Technology, USA
Harvard University, USA
California Institute of Technology, USA
National Aeronautics and Space Administration (NASA), USA

Alma mater Universidad Politécnica de Madrid (BS, PhD)
Universidad Complutense de Madrid (OD)
University of Cambridge (Medical Certificate)
Massachusetts Institute of Technology (MS, EE)

Ex-espouse Mary T Goon

Children Marcus and Nicolas Medina

Dr. Antonio Medina, born January 20 in Almeria, Spain from Antonio Medina and Maria Mar Puerta, is an engineer and eye doctor with accomplishments in the fields of engineering, medicine, physiology, and physics, including, electronics, robotics, optics, psychophysics, vision and the development of the eye. He worked for many years at Harvard Medical School. He later founded several companies and centers in the United States and worked as a scientist and engineer at the National Aeronautics and Space Administration (NASA). He is best known to the public and peers for his scientific discoveries and theories but he is also a long-running fighter for civil and human rights and defender of the weak and disadvantaged. He has been indefatigable as a defender of human rights.

His education started in Madrid. He studied engineering in the Escuela Superior de Telecomunicacion and Optometry in the Universidad Complutense. After practicing for some time as an engineer and as an eye doctor he continued his graduate studies in the University of Cambridge, United Kingdom. He published his seminal paper on the theory of ametropia and emmetropia at the age of 23. He gained two graduate degrees in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology in United States. He worked for his Doctor of Science degree at the University of Cambridge and the Massachusetts Institute of Technology, completing it at the Universidad Politecnica de Madrid. He is a fellow of Christ College, Cambridge where he had a teaching assignment at the University.

He took residency in the United States in 1981. In 1985 he became a researcher at the Eye Research Institute, Harvard Medical School. In 1988 he discovered the phenomenon of Shadow Stereopsis, by which the human visual system uses shadows to perceive depth stereoscopically. In 1989 he moved to California where he worked and became a Manager at a NASA center in Pasadena. He worked on technical aspects of robotic exploration of Planet Mars, designed the tele-operation system and protocol for planetary robots and novel instruments and telescopes which are used in orbiting and interplanetary spacecraft.

In 1992 while the R&D Manager at Delta Optics, Covina, CA. he invented, developed and manufactured ophthalmic medical devices and procedures, including “Pneumatic Keratology” to correct nearsightedness and farsightedness. He also invented the gated 3D camera.

Since 2000 he was Professor of Bioengineering supervising numerous graduate students. He continued his research in 3D vision and perfected the 3D camera to the point that his development, manufacture, demonstrations and publications lead to mass production by Microsoft, Texas Instruments, Intel and others.

In 2006 he became the Director of Engineering at Cole Instrument Corporation, Santa Ana, CA where he was in charge of development of instruments for aircraft.

Since 2008 he is the Director of Engineering and chief executive officer at Multivision Research Corporation, Costa Mesa, California.

Dr. Antonio Medina is the author of over 100 scientific publications and patents.