

# Biography

Professor Munjiza is an internationally recognized scientist with discoveries that had a great global reach and influence on the development of modern science and technology.

He studied and worked in the top research institutions of the world, such as MIT-USA, Tohoku University-Japan, the famous Computer Mechanics Group in Swansea (Zienkiewicz, Owen, Hinton), Los Alamos, University of Toronto

He achieved international recognition in science and engineering, among other things thanks to the discovery of FDEM (The Combined Finite Discrete Element Method). Today, this method is used worldwide, including leading world laboratories such as Los Alamos National Laboratory, Lawrence Livermore National Laboratory, Imperial College, University of Toronto and University of Cambridge. The international impact of FDEM is best illustrated by the fact that FDEM has been adopted as a strategic technology at Los Alamos National Laboratory.

Professor Munjiza is well known for his innovative solutions for discontinuum mechanics including: NBS search, MR search, distributed contact solutions, dynamic loading fracture and fragmentation simulation solution, detonation gas and fluid induced fragmentation simulation solution, integrated fragmentation simulation solution of fluid-solid interactions, FSIS solution for complex multiphysics virtual experimentation.

Prof. Ante Munjiza combined virtual experimentation and artificial intelligence in his scientific work, which was the reason for the invitation to hold a plenary lecture at the DEM 9 international scientific conference in Erlangen (Germany) in 2023.

He also made a significant contribution to other scientific research disciplines, from medical to environmental engineering, nanotechnology, astrophysics, artificial intelligence, and aeronautical engineering.

Professor Munjiza's scientific work had a significant impact in the civil and military sectors, including top institutions in the world, large international companies such as Orica explosives and Chevron, and two start-up companies (one in the UK and the other in Canada).

Professor Munjiza is considered one of the three leading world experts in the field of Discontinuum Mechanics.

He has published over 350 publications in various scientific fields such as: civil engineering, astrophysics, nanofluidics, chemical engineering, computer science, structures, medical engineering.

He wrote three key books on the above topic and patented his three innovative solutions in the USA.

He gave more than 50 keynotes and plenary lectures around the world (USA, Austria, Germany, Norway, UK, Italy, Canada, Spain, China, Taiwan, India, Slovakia, South Africa, Australia, Japan, Brazil, Israel, Turkey).

His works have been cited almost ten thousand times; some of the works have almost two thousand citations; with a high h-factor of 42 and an i-index of 97.

He was the mentor or commentator of more than 40 doctoral students (some of them hold significant positions in prestigious institutions such as NASA; Los Alamos National Laboratory, Technische Universität, Berlin).

He was a leader and participated in multi-million dollar research projects.

In 2012, at the invitation of the then Croatian Minister of Science, Professor Munjiza returned to the Faculty of Civil Engineering, Architecture and Geodesy of the University of Split, where he devoted himself to the education of young researchers.