

## **Prof. Michele Jamiolkowski: From Soil Tests to the Design of Large Geotechnical Projects**

Michele Jamiolkowski was born in Poland in 1932 and obtained a master's degree in Soil Mechanics and Engineering Geology in 1959 at the Warsaw Technical University. As a young geotechnical engineer, while establishing strong international links that greatly influenced his later career, he attended postgraduate courses at the University of Kiev (Ukraine), the Technical University of Torino (Italy), the University of Laval (Canada) and the Massachusetts Institute of Technology (USA).

In 1969 he was appointed to a professorship at the Technical University of Torino, where he became Professor Emeritus in 2008. In 1979 he was one of the founders of the first doctorate programme in Geotechnical Engineering in Italy.

His outstanding scientific activity is documented by more than 300 publications on peer-reviewed journals and conference proceedings, starting with the first work presented at the IX Italian National Congress of Geotechnics (Genova, 1968). Mention could be made to the following contributions, due to their representativeness of his unique ability to combine fundamental research with the development of solutions to issues raised in the engineering practice:

- Jamiolkowski, M., Ladd, C.C., Germaine, J.T., Lancellotta, R. (1985). *New developments in field and laboratory testing of soils*. 11th International Conference on Soil Mechanics and Foundation Engineering, San Francisco, California, USA, pp. 57-153.
- Jamiolkowski, M. (1988). *Research applied to geotechnical engineering (James Forrest Lecture)*. Proceedings of the Institution of Civil Engineers, Volume 84, Issue 3, pp. 571-604.
- Jamiolkowski, M. (2001). *The leaning tower of Pisa: End of an Odyssey*. 15th International Conference on Soil Mechanics and Geotechnical Engineering, Istanbul, Turkey, pp. 2979-2996.
- Jamiolkowski, M. (2003). *Soil parameters relevant to bored pile design from laboratory and in situ tests*. 4th International Geotechnical Seminar on Deep Foundations on Bored and Auger Piles, Ghent, Belgium, pp. 83-102.
- Jamiolkowski, M. (2014). *Soil mechanics and the observational method: challenges at the Zelazny Most copper tailings disposal facility*. Géotechnique, Volume 64, Issue 8, pp. 590-619.

The wide spectrum of topics, which have been addressed throughout his career, range from the soil-structure interaction problems to the geotechnical characterisation of natural deposits, from the mechanical behaviour of coarse-grained soils in the laboratory calibration chamber to the physical modelling in the centrifuge, from the ground improvement methods to the conservation of monuments and historic sites. It is challenging to find a research topic in the field of Geotechnical Engineering for which Michele Jamiolkowski has not played a major role in advancing the state of the art.

During his long and distinguished professional activity, starting with the foundation of the engineering consulting company "Studio Geotecnico Italiano" in 1964, he has been involved with a number of consulting projects around the world. Among them, the chairmanship of the International Committee for Safeguarding the Leaning Tower of Pisa (1990-2001) cannot fail to be mentioned, both for the success in ensuring the safety of the Pisa tower for a further 300 years, and for bringing the art and science of Geotechnical Engineering to the attention of the general public. Other hugely prestigious and world-famous projects should not be overlooked, as they provide evidence of the wide variety of his professional interests: the remediation operations of the nuclear power plant in Chernobyl, the Venice defence system against high water (the MOSE project), the proposed suspension bridge over the Messina Strait, the restoration and strengthening of the bell tower at San

Marco Square in Venice, and the chairmanship of the international panel of experts for the Zelazny Most copper mine tailings pond and of the technical committee for the safeguard of Rome monuments during construction of the new subway Line C through the historical city centre..

The relevance of his scientific and professional achievements is further demonstrated by the invitation to present numerous general reports at international conferences and deliver many significant lectures throughout the world. His lectures include:

- James Forrest Lecture, Institution of Civil Engineers, London (UK), 1986;
- John Buchanan Lecture, University of Texas at Austin, Austin (USA), 1994;
- Manuel Rocha Lecture, Portuguese Geotechnical Society, Lisbon (Portugal), 1997;
- Schiffman Lecture, Cornell University, Ithaca (USA), 1998;
- George Hendris Memorial Lecture, University of Western Australia, Perth (Australia), 2000;
- Terzaghi Oration, XV ICSMGE, Istanbul (Turkey), 2001;
- Arrigo Croce Lecture, Italian Geotechnical Society, Roma (Italy), 2001;
- Szechy Memorial Lecture, Hungarian Geotechnical Society, Budapest (Hungary), 2002;
- Kersten Lecture, 50th Annual Geotechnical Engineering Conference, University of Minnesota, Minneapolis (USA), 2002;
- Keynote Lecture, Skempton Conference, Imperial College London, London (UK), 2004;
- Ralph B. Peck Lecture, Geo-Institute ASCE, Georgia Tech, Atlanta (USA), 2006;
- Lymon Reese Lecture, University of Texas at Austin, Austin (USA), 2006;
- G.A. Leonards Lecture, Purdue University, West Lafayette (USA), 2006;
- Za-Chie-Moh Lecture, XVII Southeast Asian Geotechnical Conference, Taipei (Taiwan), 2010;
- Victor de Mello Lecture, VI Congresso Luso-Brasileiro de Geotecnia, Lisbon (Portugal), 2012;
- Rankine Lecture, British Geotechnical Society, London (UK), 2013;
- The Victor Milligan Lecture, Queen's University, Ontario (Canada), 2013;
- Tschebotarioff Lecture, TC207 Conference on Soil-Structure Interaction, Underground Structures and Retaining Walls, Saint Petersburg (Russia), 2014;
- James K. Mitchell Lecture, 3rd International Symposium on Cone Penetration Testing (CPT'14), Las Vegas, Nevada (USA), 2014;
- C.W. Lovell Distinguished Lecture, Purdue University, West Lafayette (USA), 2015;
- Prof. Silvano Marchetti Memorial Session on In-situ testing, 19th ICSMGE, Seoul (Korea), 2017;
- John Mitchell Lecture, DFI-EFFC International Conference, Rome, 2018.

The respect gained in the academic and professional relationships with preeminent figures of the international geotechnical community resulted in many awards and honours (e.g. the De Beer Award from the Belgium Geotechnical Society, the Karl Terzaghi Award and the Ralph B. Peck Lecture Award from the ASCE, and the Italian Award "Saviour of the Art"), as well as in his election to the presidency of the International Society for Soil Mechanics and Geotechnical Engineering for the period 1994-1997.

Of his many unique qualities, those who have had the pleasure of working closely with Michele Jamiolkowski often single out his broad and up-to-date knowledge of the worldwide geotechnical research and practice scene, and his ability to motivate young researchers and colleagues to bring out the best of themselves.