Francesco Braghin was born in Milano (MI) the 14th October 1972. He graduated in Mechanical Engineering in 1997 at Politecnico di Milano and has obtained the PhD in Applied Mechanics in 2001. In 2001 he became Researcher, in 2011 he became Associate Professor in Applied Mechanics at the Department of Mechanical Engineering of Politecnico di Milano and since 2015 he is Full Professor in Applied Mechanics at the Department of Mechanical Engineering of Politecnico di Milano. He has been teaching several courses among which Design and Fundamentals of Mechanics, Applied Mechanics, Dynamics and Vibration of Mechanical Systems, Control and Actuating Devices and Mechatronic Systems and Laboratory. Presently he holds the courses of Control and Actuating Devices at the first year of Master Degree for Mechanical Engineering and Mechatronic Systems and Laboratory at the second year of Master Degree for Mechanical Engineering.

His research activity started with the modeling of complex contact phenomena such as the interaction between tire and road and between wheel and rail. This led to a big step forward in the comprehension of these phenomena as well as associated phenomena such as the prediction of wear and limit conditions (i.e., for the railway field, derailment and, for the automotive field, macro sliding for F1 tires). It was a natural evolution to expand research in the field of car and rail vehicle dynamics. More and more these vehicles include mechatronic components to improve active and passive safety, comfort and performances. Thus, research evolved towards mechatronic systems, both at basic research level (e.g. optimal fatigue control logics, design and optimization of MEMS sensors as well as of smart actuators based on magnetostrictive and piezo materials) and at component/system level (e.g. smart CFRP structures able to “diagnostic” their status and fatigue life as well as to improve their performances). Most of the above researches were carried out in cooperation with leading industries in the respective field. Finally, more for fun than for work, he has modeled, designed and produced sports equipment in collaboration with the National Olympic Committee and with an Italian football team.

The above described researches have led, where allowed by NDAs, to more than 220 papers mainly at international conferences and on international journals. Making reference to Scopus database, Prof. Braghin is author of 128 papers, 38 of which on journals, has 555 citations and has an h-index equal to 12. He is also editor of “The Engineering Approach to Winter Sports” by Springer published in 2015.

He is in the editorial board of a couple of journal among which Mathematical Problems in Engineering and SRN Automotive Engineering and has acted at track leader in some international conferences, the last of which is ASME 2014 12th Biennial Conference on Engineering Systems Design and Analysis (ESDA2014).

Prof. Braghin has been in charge of or took part in seven EU founded projects (the last of which is D-Rail project on the development of the future rail freight system to reduce the occurrences and impact of derailment), a couple of national founded projects (the last of which dealing with “Contact and adherence in kinematic couples in vehicles”) and several contracts with industries, In particular, the most recent contracts he is in charge of are with Lucchini RS, Italcertifer, Telema, Pirelli Tyre and Ferrari.

He is member of the Institute of Electrical and Electronics Engineers since 2008, of the American Society of Mechanical Engineers since 2009 and of the Italian Tribology Association since 2005. He has been supervisor of several Master thesis carried out both at Politecnico di Milano and at foreign universities (among which TU Munich, TU Delft, ULB, RWTH Aachen, …) and is presently supervisor of five PhD students.