

Anna Pandolfi, Politecnico di Milano

Talk title	Computational Models and Experimental methods for the Human Cornea
Biography	<p>Professor of Structural Mechanics and Solid Mechanics at the Politecnico di Milano, where she has been hired in 1995 as assistant Professor, since 1996 Anna Pandolfi holds an intermittent Visiting Associate Position at Caltech, Pasadena CA, USA. She has been advising 10 PhD students and 4 post-docs. She has been an Elected Member of the Euromech Council from 2016 to 2021. She has been serving as coordinator of the Italian Group of Computational Mechanics (GIMC) from 2015 to 2019. She is the editor in Chief of Meccanica (Springer) and she serves in the Editorial Boards of the International Journal of Fracture, PLOS ONE, ASME Journal of Journal of Engineering Materials and Technology, and Journal of Theoretical, Computational and Applied Mechanics. Reviewer for more than 90 scientific journals in the field of mechanics, biomechanics and physics, she has delivered 22 plenary or keynote lectures in international conferences and has been invited to give research seminars in international Scientific Institutions in more than 80 occasions. She is author or co-author of 90 publications in international peer-reviewed journals and of other 50 scientific works. Her major scientific contributions to the scientific research are in the field of computational mechanics, with the development of advanced fracture tracking techniques (cohesive elements, eigenerosion), particle methods for the discretization of solids and fluids, a new concept concrete with attenuation properties (metaconcrete), multiscale material models for porous brittle materials (brittle damage) used to simulate fracking. A second field of intensive research is biomechanics of soft tissues, applied in particular to the behaviour of active tissues, muscles, intestines, and eyes. She has been developing several successful models of the human cornea, used to model and assist patient specific refractive surgery, in strong connection with ophthalmologists. She has developed an active network of collaborators in Italy, Germany, France, and USA, with interaction and exchange of students.</p>