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- Professor of Mechanics University Paris 12.
- Former Director of the Laboratory of Mechanics & Physics (OAB2 Laboratory).
- Past Dean of the Faculty of Science & Technology, University Paris 12.
- Past Director of the National Doctoral School in Biomechanics.
- Member of the World Council of Biomechanics.

Interest and expertise in **biomechanics of the cardiovascular and musculoskeletal systems** studied from the viewpoint of the functioning analysis and applications to the clinical investigations and design of new artificial organs. Computational methods of modelisation and specific instruments for mechanical properties characterization have been designed in order to analyze bio-fluid and bio-solid mechanical coupling, on the one part, and structural mechanics phenomena associated to organ and tissue motion and functioning, on the other. Recently a great deal of research effort has been put at the microscopic scale in the field of **tissue engineering and cellular mechanics**, as applied to different medical fields such as bone tissue remodeling, dermis reconstitution and artificial connective tissue used in orthopedics.

Some publications:

Oddou C, Pierre J., *Biomechanical aspects in tissue engineering*, Clin Hemorheol Microcirc. 2005, 33, 3, 189-95.

Kornelik S., Naili S., Oddou C., Boubentchikov A., *Fluid-wall interactions in a deformable system* EPJ, Appl. phys. 2003, 24, 2, 139–152.

Cardoso L, Teboul F, Sedel L, Oddou C, Meunier A., *In vitro acoustic waves propagation in human and bovine cancellous bone*, J Bone Miner Res. 2003, 18, 10, 1803-12.

Canadas P, Laurent VM, Oddou C, Isabey D, Wendling S., *A cellular tensegrity model to analyse the structural viscoelasticity of the cytoskeleton*, J Theor Biol. 2002, 218, 2, 155-73.

Wendling S, Canadas P, Oddou C, Meunier A., *Interrelations between elastic energy and strain in a tensegrity model: contribution to the analysis of the mechanical response in living cell*, Comput Methods Biomech Biomed Engin. 2002, 5, 1, 1-6.

Cardoso, L., Teboul, F., Meunier, A. and Oddou, C., *Ultrasound Characterization of Cancellous Bone: Theoretical and Experimental analysis*, Transactions of the Ultrasonics Symposium IEEE 2001, 2, 1213-16.

Oddou C, Wendling S, Petite H, Meunier A., *Cell mechanotransduction and interactions with biological tissues*, Biorheology. 2000, 37, 1-2, 17-25.

Tasu JP, Mousseaux E, Delouche A, Oddou C, Jolivet O, Bittoun J., *Estimation of pressure gradients in pulsatile flow from magnetic resonance acceleration measurements*, Magn Reson Med. 2000, 44, 1, 66-72.

Naili S, Oddou C., *Buckling of a short cylindrical shell surrounded by an elastic medium*, J. appl. mech. 2000, 67, 1, 212–214.

Wendling S. , Planus E. , Laurent V. M. , Barbe L. , Mary A. , Oddou C. , Isabey D., *Role of cellular tone and microenvironmental conditions on cytoskeleton stiffness assessed by tensegrity model*, EPJ, Appl. phys. 2000 , 9, 1, 51–62.