

# Sylvie Lorthois

## *Principal Investigator*



Dr. Lorthois is *Directeur de Recherches* at the Fluid Mechanics Institute of Toulouse, where she led the Porous Media Group (13 academics, 8 clinicians) between 2012 and 2016.

She holds an engineering degree and a Master of Science in Fluid Mechanics from Ecole Nationale Supérieure de l'Aéronautique et de l'Espace (Sup'aero) in Toulouse, France, and a Master of Science in Haemostasis, Thrombosis and Vascular Biology from Paris Sud University. She graduated from Institut National Polytechnique de Toulouse in 1999 with a Ph.D. in Fluid Mechanics.

Her doctoral research focused on the role of wall shear stress in carotid disease. After a postdoctoral stay in the Department of Mechanical Engineering, University of California at Berkeley, on numerical simulations of flow-induced artifacts in Magnetic Resonance Angiography, she was appointed by the French National Center for Scientific Research (CNRS) in 2001.

She currently studies the structure/function relationships in brain microcirculation, mainly using theoretical or numerical strategies, some of them being inspired from geological porous media and petroleum engineering. She is the laureate of the European Research Council, the most competitive European funding system (Consolidator Grant BrainMicroFlow). In this framework, she collaborates with Cornell BME (Chris Schaffer and Nozomi Nishimura), where she is currently the Mary Shepard B. Upson Visiting Professor, in order to understand the role of brain microcirculation in the development of Alzheimer's disease.