

Abstract Dr. Christian Contarino

»From systems of hyperbolic and ordinary differential equations to neurovascular disorders: towards the Digital Avatar«

Hyperbolic and ordinary differential equations are a powerful modelling tool that is applied nowadays in several fields, ranging from gas dynamics, to hydrodynamics and gravitational waves. In recent decades, modelling of the cardiovascular system has become increasingly important due to its potential medical applications in education, research and new discoveries. In this talk, I will briefly present a whole-body fluid mathematical model and discuss its applications for studying neurovascular disorders.