

17^e Colloque Ile de Science Paris-Saclay

JUMEAUX NUMERIQUES

Diversité, défis scientifiques, enjeux sociétaux et industriels

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CentraleSupélec



INTERVENANT(E)S – FICHE DE PRESENTATION

NOM/Prénom : VIGNON-CLEMENTEL Irène

Appartenance (organisme) : Inria

Titre/Fonction : Directrice de Recherche

Courte biographie :

Irene Vignon-Clementel is directrice de recherche (prof. equiv.) at Inria, the French National Institute for Research in Digital Science and Technology. She holds a 'habilitation' degree in Applied Mathematics (Sorbonne U., formerly U. Pierre & Marie Curie) and a PhD in Mechanical Engineering (Stanford U.). Her research focuses on modeling and numerical simulations of physiological flows to better understand a number of pathophysiology and their treatment (surgical planning, medical device design), especially related to blood circulation. This requires developing models of different complexities, coupling them, that their numerical implementation is robust, and that their parameters are based on medical or experimental data specific to a subject. Applications include congenital and acquired cardiovascular diseases, respiratory diseases, and more recently liver pathophysiology and the interpretation of non-invasive dynamic imaging. Irene VC is member of several conference committees, of the Int. J. Num. Methods Biomed. Eng. editorial board, of the VPHi board, of the scientific advisory committee for the 3DS-FDA ENRICHMENT Project (USA) and the BIOREME network (UK), and was co-chair of the international conference VPH2020. She received the top recipient award of the western states American Heart Association fellowship (2004-2006), the student award at the World Congress of Computational Mechanics by the USACM and the USACM Executive Committee (2006), Inria excellence awards (2012 and 2016), and has been awarded an ERC consolidator grant (MoDeLLiver, 2020-2025). She has been working with companies and clinicians as a PI in a number of national and international grants such as a Leducq transatlantic network of excellence, and actively promoting the computational bioengineering and medicine interface through co-supervision of MD-PhDs, joint research projects, conference organization and interface articles with clinicians.

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