

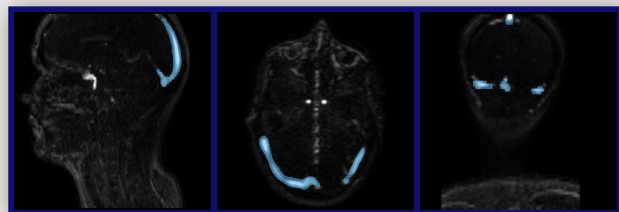


Biomedical Modeling, Data Assimilation and Model Order Reduction

4TU.AMI INTRODUCTION PRESENTATION

Pierre Mollo

Department of Mathematics and Computer Science, CASA Group



MRI sequences

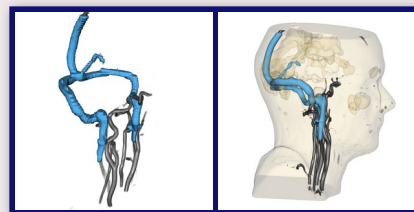
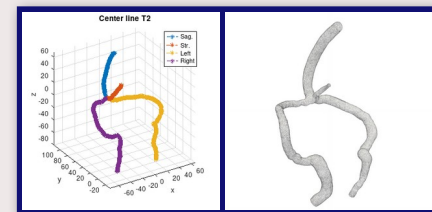
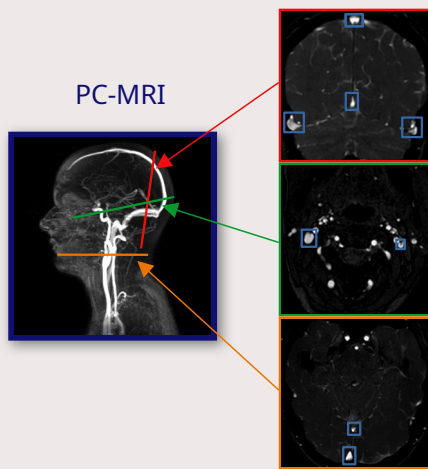


Image processing

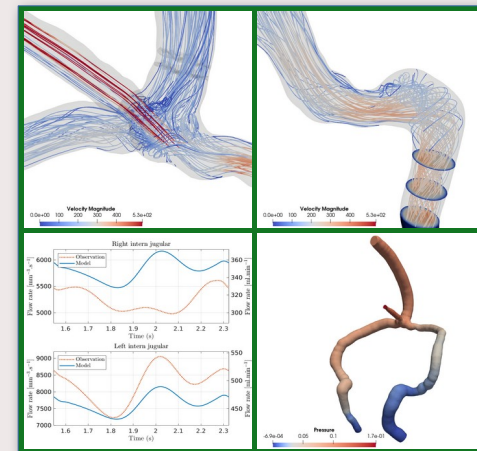
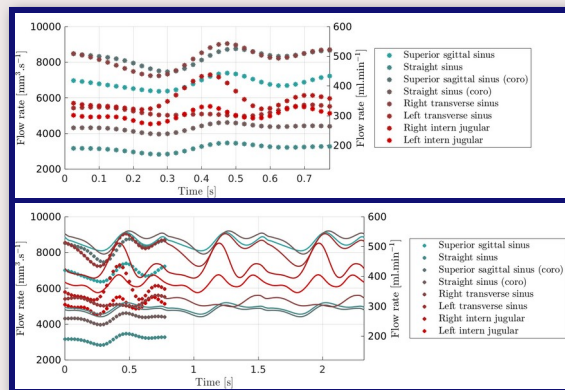


Computational mesh



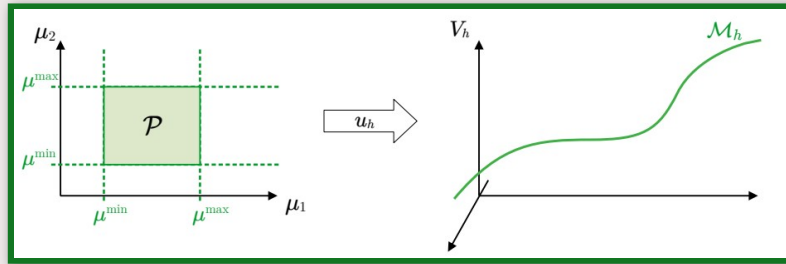
PC-MRI

Flow processing

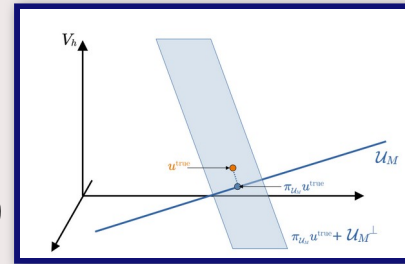


Numerical simulations

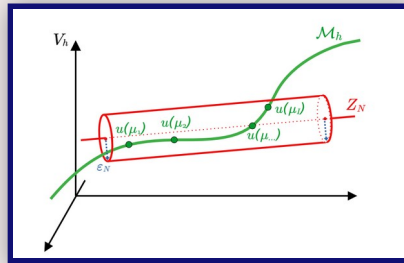
PhD. thesis (2019-2022) and Postdoc (2023-...)



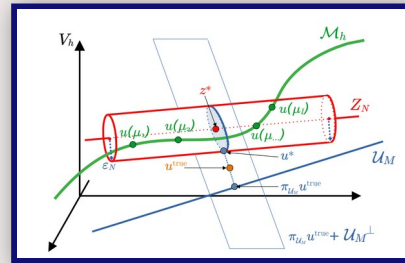
Parametrized model



Modeling observations



Linear Model Order Reduction



Data assimilation (PBDW)

What's next ?

- explore other DA methods (KF, 3D/4DVAR)
- explore other MOR methods (NL-MOR, CAE)

What we are looking for ?

- new applications (in new contexts)
- nice discussions

Mail: p.m.mollo@tue.nl