

- 0 **Davide Baroli**, Multiscale domain decomposition methods for high heterogeneous Darcy flows, PhD Thesis, Politecnico di Milano, <http://hdl.handle.net/10589/115523>
- 1 **Davide Baroli**, Alfio Quarteroni, and Ricardo Ruiz-Baier. “Convergence of a stabilised discontinuous Galerkin method for incompressible nonlinear elasticity”. In *Advances in Computational Mathematics*, 39(2):425–443, 2013, <https://doi.org/10.1007/s10444-012-9286-8>.
- 2 Alberto Sartori, **Davide Baroli**, Antonio Cammi, Lelio Luzzi, and Gianluigi Rozza. “A reduced order model for multi-group time-dependent parametrized reactor spatial kinetics”. In *22nd International Conference on Nuclear Engineering*, pages V005T17A048– V005T17A048. *American Society of Mechanical Engineers*, 2014, <https://doi.org/10.1115/ICONE22-30707>
- 3 Alberto Sartori, **Davide Baroli**, Antonio Cammi, Davide Chiesa, Lelio Luzzi, Roberto Ponciroli, Ezio Previtali, Marco Enrico Ricotti, Gianluigi Rozza, and Monica Sisti. “Comparison of a modal method and a proper orthogonal decomposition approach for multi-group time-dependent reactor spatial kinetics”. In *Annals of Nuclear Energy*, 71:217–229, <https://doi.org/10.1016/j.anucene.2014.03.043>, 2014.
- 4 **Davide Baroli**, Cristina Maria Cova, Simona Perotto, Lorenzo Sala and Alessandro Veneziani. “Hi-POD solution of parametrized fluid dynamics problems: preliminary results”. In *Model Reduction of Parametrized Systems III*, MS&A series, Springer 2018 [https://doi.org/10.1007/978-3-319-58786-8\\_15](https://doi.org/10.1007/978-3-319-58786-8_15)
- 5 Carolina Introvini, Stefano Lorenzi, **Davide Baroli**, Antonio Cammi, Benhard Peters, Stephane Bordas, *A mass conservative Kalman filter algorithm for computational thermo-fluid dynamics*, accepted in *Materials Journal*, section: Structure Analysis and Characterization, special issue Randomness and Uncertainty, 2018. <https://www.mdpi.com/1996-1944/11/11/2222>
- 6 Michele Cascio, **Davide Baroli**, Ioannis Deretzis, Stephane Bordas, Antonino La Magna, *Coupled Molecular Dynamics and Finite Element Method: simulations of kinetics induced by field mediated interaction*, accepted in *Physical Review. E : Statistical, Nonlinear, and Soft Matter Physics*, American Physical Society, 2019, [10.1103/PhysRevE.99.063307](https://doi.org/10.1103/PhysRevE.99.063307)
- 7 H. Xu, **Davide Baroli**, F. di Massimo, Alessandro Veneziani, Annalisa Quaini. “Backflow Stabilization by Deconvolution-based Large Eddy Simulation Modeling”. *Journal of Computational Physics*, 2020, <https://doi.org/10.1016/j.jcp.2019.109103>.
- 8 H. Xu, **Davide Baroli**, Alessandro Veneziani. “Global Sensitivity Analysis for Patient-Specific Aortic Simulations: the Role of Geometry, Boundary Condition and LES Modeling Parameters”. *ASME- Journal of Biomechanical Engineering*, 2020.
- 9 Jack S. Hale, E. Schenone, **D. Baroli**, L. A.A. Beex, Stéphane P.A. Bordas, *A hyper-reduction method using adaptivity to cut the assembly costs of reduced order models*, *Computer Methods in Applied Mechanics and Engineering*, Volume 380, 2021, 113723, <https://doi.org/10.1016/j.cma.2021.113723>.
- 10 D. Sutula, A. Elonega, F. Chouly, J. Chambert, A. Lejeunea, P. Hauseux, S. Bordas, E. Jacquet **D. Baroli**, An open source pipeline for design of experiments for hyper-elastic models of the skin with applications to keloids, 2020, <https://doi.org/10.1016/j.jmbbm.2020.103999> .
11. A. Viguerie, G. Lorenzo, Auricchio, F., **D. Baroli**, T.J. Hughes, A. Patton, A. Reali, T.E. Yankeelov and A. Veneziani, Simulating the spread of COVID-19 via spatially-resolved susceptible-exposed-infected-recovered-deceased (SEIRD) model with heterogeneous diffusion, accepted in *Letters in Applied Mathematics*; <https://doi.org/10.1016/j.aml.2020.106617>
12. A. Viguerie, G. Lorenzo, Auricchio, F., **D. Baroli**, N. Nielsen, T.J. Hughes, A. Patton, A. Reali, T.E. Yankeelov and A. Veneziani, Diffusion-reaction compartmental models formulated in a continuum mechanics framework: application to COVID-19, mathematical analysis, and numerical study , in special issue and in its cover on *Computational Mechanics Journal*, 2020 <https://doi.org/10.1007/s00466-020-01888-0> .
13. Carolina Introvini, Stefano Lorenzi, Davide Baroli, Antonio Cammi, Gianluigi Rozza, *A Reduced Order Kalman Filter for Computational Fluid-Dynamics Applications*, [10.14293/P2199-8442.1.SOP-MATH.VLSEXE.v1](https://doi.org/10.14293/P2199-8442.1.SOP-MATH.VLSEXE.v1), submitted MPDI Fluids, 2021.
14. Andrea Bragantini, **Davide Baroli**, Andres Posada, A. Benigni, *Neural Network based State Estimation: the effect of Pseudo-measurements*, accepted *IEEE Transaction*, 2021.
15. Camilo Suarez Afanador, Rémi Cornaggia, Aurélien Maurel-Pantel, Noël Lahellec, Djaffar Boussa, Hervé Moulinec, Noelle Billon, **Davide Baroli** and Stéphane Bordas *Mean-Field Approximations in Effective Thermo-viscoelastic Behavior for Composite Parts Obtained via Fused Deposition Modeling Technology*, AIP, 2021.

16. Qingyuan Hu, **D. Baroli**, Shuzhen Rao, Isogeometric analysis of multi-patch solid-shells in large deformation, <https://doi.org/10.1007/s10409-020-01046-y> Acta Mechanica Sinica, 2021
17. S. Urcun, **D. Baroli**, P-Y. Rohan, G. Sciume, G. Lorenzo, R. Howells, W. Skalli, S.P.A. Bordas, V. Lubrano. Oncology and mechanics: landmark studies and promising clinical applications, <https://doi.org/10.1016/bs.aams.2022.05.003>, Advances in Applied Mechanics, Elsevier, 2022.