Bibliography

Nicola Demo

November 3, 2021

References

[1] G. Ortali, N. Demo, and G. Rozza, "Gaussian process approach within a data-driven POD framework for fluid dynamics engineering problems," *Mathematics in Engineering*, vol. 4, no. 3, pp. 1–16, 2022. DOI: 10.3934/mine.2022021. arXiv: 2012.01989 [math.NA].

[2] F. Andreuzzi, N. Demo, and G. Rozza, "A dynamic mode decomposition extension for the forecasting of parametric dynamical systems," *Submitted*, 2021. arXiv: 2110.09163 [math.NA].

[3] N. Demo, M. Strazzullo, and G. Rozza, "An extended physics informed neural network for preliminary analysis of parametric optimal control problems," *Submitted*, 2021. arXiv: 2110.13530 [math.NA].

[4] N. Demo, M. Tezzele, A. Mola, and G. Rozza, "Hull shape design optimization with parameter space and model reductions, and self-learning mesh morphing," *Journal of Marine Science and Engineering*, vol. 9, no. 2, 2021, ISSN: 2077-1312. DOI: 10.3390/jmse9020185. arXiv: 2101.03781 [math.NA]. [Online]. Available: https://www.mdpi.com/2077-1312/9/2/185.

[5] N. Demo, M. Tezzele, and G. Rozza, "A supervised learning approach involving active subspaces for an efficient genetic algorithm in high-dimensional optimization problems," *SIAM Journal on Scientific Computing*, vol. 43, no. 3, B831–B853, 2021. DOI: 10.1137/20M1345219. arXiv: 2006.07282 [math.NA].

[6] N. Demo, G. Ortali, G. Gustin, G. Rozza, and G. Lavini, "An efficient computational framework for naval shape design and optimization problems by means of data-driven reduced order modeling techniques," *Bollettino dell'Unione Matematica Italiana*, Nov. 2020, ISSN: 2198-2759. DOI: 10.1007/s40574-020-00263-4. arXiv: 2004.11201 [math.NA]. [Online]. Available: https://doi.org/10.1007/s40574-020-00263-4.

[7] M. Tezzele, N. Demo, A. Mola, and G. Rozza, "PyGeM: Python geometrical morphing," *Software Impacts*, p. 100 047, 2020, ISSN: 2665-9638. DOI: https://doi.org/10.1016/j.simpa.2020.100047. [Online]. Available: http://www.sciencedirect.com/science/article/pii/S2665963820300385.

[8] M. Tezzele, N. Demo, G. Stabile, A. Mola, and G. Rozza, "Enhancing cfd predictions in shape design problems by model and parameter space reduction," *Advanced Modeling and Simulation in Engineering Sciences*, vol. 7, no. 1, p. 40, Oct. 2020, ISSN: 2213-7467. DOI: 10.1186/s40323-020-00177-y. arXiv: 2001.05237 [math.NA]. [Online]. Available: https://doi.org/10.1186/s40323-020-00177-y.

[9] N. Demo, M. Tezzele, A. Mola, and G. Rozza, "A complete data-driven framework for the efficient solution of parametric shape design and optimisation in naval engineering problems," in *VIII International Conference on Computational Methods in Marine Engineering*, 2019. arXiv: 1905.05982 [math.NA].

[10] N. Demo, M. Tezzele, and G. Rozza, "A non-intrusive approach for the reconstruction of POD modal coefficients through active subspaces," *Comptes Rendus Mécanique*, vol. 347, no. 11, pp. 873–881, Nov. 2019. DOI: 10.1016/j.crme.2019.11.012. arXiv: 1907.12777 [math.NA]. [Online]. Available: https://doi.org/10.1016/j.crme.2019.11.012.

[11] M. Tezzele, N. Demo, and G. Rozza, "Shape optimization through proper orthogonal decomposition with interpolation and dynamic mode decomposition enhanced by active subspaces," in *VIII International Conference on Computational Methods in Marine Engineering*, 2019. arXiv: 1905.05483 [math.NA].

[12] N. Demo, M. Tezzele, G. Gustin, G. Lavini, and G. Rozza, "Shape optimization by means of proper orthogonal decomposition and dynamic mode decomposition," in *Technology and Science for the Ships of the Future: Proceedings of NAV 2018: 19th International Conference on Ship & Maritime Research*, IOS Press, 2018, pp. 212–219. DOI: 10.3233/978-1-61499-870-9-212. arXiv: 1803.07368 [math.NA].

[13] N. Demo, M. Tezzele, A. Mola, and G. Rozza, "An efficient shape parametrisation by free-form deformation enhanced by active subspace for hull hydrodynamic ship design problems in open source environment," in *The 28th International Ocean and Polar Engineering Conference*, 2018. arXiv: 1801.06369 [math.NA].

[14] N. Demo, M. Tezzele, and G. Rozza, "EZyRB: Easy reduced basis method," *Journal of Open Source Software*, vol. 3, no. 24, p. 661, Apr. 2018. DOI: 10.21105/joss.00661. [Online]. Available: https://doi.org/10.21105/joss.00661.

[15] N. Demo, M. Tezzele, and G. Rozza, "PyDMD: Python dynamic mode decomposition," *Journal of Open Source Software*, vol. 3, no. 22, p. 530, Feb. 2018. DOI: 10.21105/joss.00530. [Online]. Available: https://doi.org/10.21105/joss.00530.

[16] F. Garotta, N. Demo, M. Tezzele, M. Carraturo, A. Reali, and G. Rozza, "Reduced order isogeometric analysis approach for PDEs in parametrized domains," *LNCS&E series, Springer, QUIET special volume "Quantification of Uncertainty: improving efficiency and technology [in press]*, 2018. arXiv: 1811.08631 [math.NA].

[17] G. Rozza, M. H. Malik, N. Demo, *et al.*, "Advances in Reduced Order Methods for Parametric Industrial Problems in Computational Fluid Dynamics," in *Proceedings of the ECCOMAS Congress 2018*, ECCOMAS, Glasgow, UK: ECCOMAS, 2018. arXiv: 1811.08319 [math.NA].

[18] M. Tezzele, N. Demo, M. Gadalla, A. Mola, and G. Rozza, "Model order reduction by means of active subspaces and dynamic mode decomposition for parametric hull shape design hydrodynamics," in *Technology and Science for the Ships of the Future: Proceedings of NAV 2018: 19th International Conference on Ship & Maritime Research*, IOS Press, 2018, pp. 569–576. DOI: 10.3233/978-1-61499-870-9-569. arXiv: 1803.07377 [math.NA].

[19] M. Tezzele, N. Demo, A. Mola, and G. Rozza, "An integrated data-driven computational pipeline with model order reduction for industrial and applied mathematics," in *Novel mathematics inspired by industrial challenges [in press]*. 2018. arXiv: 1810.12364 [math.NA].

[20] E. Calore, N. Demo, S. F. Schifano, and R. Tripiccione, "Experience on vectorizing lattice boltzmann kernels for multi- and many-core architectures," in *Parallel Processing and Applied Mathematics*. Springer International Publishing, 2016, pp. 53–62, ISBN: 978-3-319-32149-3. DOI: 10.1007/978-3-319-32149-3_6. [Online]. Available: https://doi.org/10.1007/978-3-319-32149-3_6.