List of Important Publications

Babak Maboudi Afkham
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1. Babak Maboudi Afkham, Nicolai Andre Brogaard Riis, Yiqiu Dong, Per Christian Hansen. "Inferring Object Boundaries and their Roughness with Uncertainty Quantification", 29 January 2024, preprint available at Research Square [https://doi.org/10.21203/rs.3.rs-3894410/v1]

2. Babak Maboudi Afkham, Julianne Chung, and Matthias Chung. "Uncertainty Quantification for Goal-Oriented Inverse Problems via Variational Encoder-Decoder Networks", 2024, preprint available at arXiv [https://iopscience.iop.org/article/10.1088/1361-6420/ad5373].

3. Babak Maboudi Afkham, Kim Knudsen, Aksel Kaastrup Rasmussen, and Tanja Tarvainen. "A Bayesian Approach For Consistent Reconstruction of Inclusions." Inverse Problems 40, no. 4 (2024): 045004. available at [https://iopscience.iop.org/article/10.1088/1361-6420/ad2531/meta]

4. Babak Maboudi Afkham, Yiqiu Dong, and Per Christian Hansen. "Uncertainty Quantification of Inclusion Boundaries in the Context of X-Ray Tomography." SIAM/ASA Journal on Uncertainty Quantification 11.1 (2023): 31-61. available at [https://epubs.siam.org/doi/abs/10.1137/21M1433782]

5. Kenneth Scheel, Babak Maboudi Afkham, Kim Knudsen, "Computational Uncertainty Quantification for Parametrized Magnetic Resonance Electrical Impedance Tomography", Proceedings of the 23rd International Conference on Biomedical Applications of Electrical Impedance Tomography, (2023): 57. available at [https://zenodo.org/records/8037618]

6. Amal Alghami, Nicolai Andre Brogaard Riis, Babak Maboudi Afkham, Felipe Uribe, Silja L. Christensen, Per Christian Hansen, and Jakob Sauer Jørgensen. "CUQIpy-Part II: Computational Uncertainty Quantification for PDE-Based Inverse Problems in Python." Inverse Problems 40 (2024): 045010. available at [https://iopscience.iop.org/article/10.1088/1361-6420/ad22e8/meta]

7. Nicolai Andre Brogaard Riis, Amal Alghamdi, Felipe Uribe, Silja L. Christensen, Babak Maboudi Afkham, Per Christian Hansen, Jakob Sauer Jørgensen. "CUQIpy-Part I: Computational Uncertainty Quantification for Inverse Problems in Python." Inverse Problems 40 (2024): 045009. available at
   [https://iopscience.iop.org/article/10.1088/1361-6420/ad22e7/meta]

8. Babak Maboudi Afkham, Julianne Chung, and Matthias Chung. "Learning Regularization Parameters of Inverse Problems via Deep Neural Networks" Inverse Problems 37.10 (2021): 105017. available at [https://iopscience.iop.org/article/10.1088/1361-6420/ac245d/meta]

9. Babak Maboudi Afkham, Nicolò Ripamonti, Qian Wang, and Jan S. Hesthaven. "Conservative Model Order Reduction for Fluid Flow" Quantification of Uncertainty: Improving Efficiency and Technology: QUIET selected contributions (2020): 67-99. available at [https://link.springer.com/chapter/10.1007/978-3-030-48721-8_4]

10. Babak Maboudi Afkham, and Jan S. Hesthaven. "Structure Preserving Model Reduction of Parametric Hamiltonian Systems." SIAM Journal on Scientific Computing 39.6 (2017): A2616-A2644. available at [https://epubs.siam.org/doi/abs/10.1137/17M1111991]