

(A) Peer-reviewed scientific articles

51. T. HELIN, Y. MARZOUK, J.R. ROJO-GARCIA, Bayesian optimal experimental design with Wasserstein information criteria, arXiv:2504.10092
50. E.L.K. BLÅSTEN, T. HELIN, A. KUJANPÄÄ, L. OKSANEN AND J. RAILO, Recovering a $(1+1)$ -dimensional wave equation from a single white noise boundary measurement, arXiv:2503.18515
49. ABHISHAKE, N. MÜCKE AND T. HELIN, Gradient-Based Non-Linear Inverse Learning, arXiv:2412.16794
48. G.S. ALBERTI, E. DE VITO, T. HELIN, M. LASSAS, L. RATTI AND M. SANTACESARIA, Learning sparsity-promoting regularizers for linear inverse problems, arXiv:2412.16031
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46. F. SCHNEIDER, DL. DUONG, M. LASSAS, MV. DE HOOP AND T. HELIN, Reducing the cost of posterior sampling in linear inverse problems via task-dependent score learning, arXiv:2405.15643
45. H.M. CHENG, T. HELIN, VP. MANNINEN, T. HOLOPAINEN, J. JOKINEN, S. SORVARI AND A. RUPP, Recovery of transversely-isotropic elastic material parameters in induction motor rotors, arXiv:2405.06388
44. ABHISHAKE, T. HELIN AND N. MÜCKE, Statistical inverse learning problems with random observations, to appear in RICAM series "Data-driven models in inverse problems", arXiv:2312.15341.
43. A. GARBUNO-IÑIGO, T. HELIN, F. HOFFMANN AND B. HOSSEINI, Bayesian Posterior Perturbation Analysis With Transport Semi-Metrics, accepted to Bayesian Analysis, arXiv:2303.01512.
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40. T. HELIN, Least squares approximations in linear statistical inverse learning problems, SIAM Journal on Numerical Analysis **62**(4), 2025-2047, 2024.
39. T. HELIN, N. HYVÖNEN, J. MAANINEN AND J.-P. PUSKA, Bayesian design of measurements for magnetorelaxometry imaging, Inverse Problems **39**(12), 125020, 2023.
38. D.-L. DUONG, T. HELIN AND R. ROJO GARCIA, Stability estimates for the expected utility in Bayesian optimal experimental design, Inverse Problems **39**(12), 125008, 2023.
37. T. A. BUBBA, M. BURGER, T. HELIN AND L. RATTI, Convex regularization in statistical inverse learning problems, Inverse Problems and Imaging **17** (6), 1193-1225, 2023.

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35. J. NOUSIAINEN, C. RAJANI, M. KASPER, T. HELIN ET AL., Towards on-sky adaptive optics control using reinforcement learning, *Astronomy & Astrophysics* **664**, A71, 2022.
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11. T. HELIN, M. LASSAS AND L. PÄIVÄRINTA, *Inverse acoustic scattering problem in half-space with anisotropic random impedance*, *Journal of Differential Equations* **262**(4) (2017).
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2. T. HELIN, *On infinite-dimensional hierarchical probability models in statistical inverse problems*, Inverse probl. imaging **3**(4) (2009), pp. 567–577.
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(B) Non-refereed scientific articles

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15. E. STURM ET AL., The MICADO first light imager for the ELT: overview and current status, Proceedings of the SPIE conference Ground-based and Airborne Instrumentation for Astronomy X 13096 (2024)
14. A. GRAZIAN ET AL., Status of the PSF Reconstruction Work Package for MICADO ELT, Proceeding of the SPIE conference Adaptive Optics Systems VIII 12185 (2022)
13. J. NOUSIAINEN, B. ENGLER, M. KASPER, T. HELIN, C. T. HERITIER AND C. RAJANI, Advances in model-based reinforcement learning for adaptive optics control, Proceeding of the SPIE conference Adaptive Optics Systems VIII 12185 (2022)
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5. J. LEHTONEN AND T. HELIN, Correlation-based imaging in adaptive optics, Mathematics in Imaging, MW3D. 3. (2019)
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(G) Theses

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