

Publications of Kim Steenstrup Pedersen

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Ph.D. thesis:

- **Kim S. Pedersen.** Statistics of Natural Image Geometry. Ph.D. Thesis, Department of Computer Science, University of Copenhagen, Denmark, January 2003. Published as DIKU tech. report no. 2003/04.

Peer reviewed scientific journal papers: (20)

- Ole-Christian Galbo Engstrøm, Michela Albano-Gaglio, Erik Schou Dreier, Yamine Bouzembrak, Maria Font-i-Furnols, Puneet Mishra, **Kim Steenstrup Pedersen.** Transforming Hyperspectral Images Into Chemical Maps: A Novel End-to-End Deep Learning Approach. *Journal of Chemometrics*, 2025. Accepted. DOI: 10.1002/cem.70041
- Ashkan Tashk, Klavs Martin Sørensen, Søren Balling Engelsen, **Kim Steenstrup Pedersen**, Carl Emil Eskildsen. MIPLS2: Exploiting PLS2 to impute missing values in a two-block system with multiple response variables. *Analytica Chimica Acta*, Volume 1364: 344134, 22 August 2025. DOI: 10.1016/j.aca.2025.344134
- Roberta Hunt, José L Reyes-Hernández, Josh Jenkins Shaw, Alexey Solodovnikov, **Kim Steenstrup Pedersen.** Integrating Deep Learning Derived Morphological Traits and Molecular Data for Total-Evidence Phylogenetics: Lessons from Digitized Collections. *Systematic Biology*, 2025; syae072, DOI: 10.1093/sysbio/syae072
- Ole-Christian Galbo Engstrøm, Erik Schou Dreier, Birthe Møller Jespersen, and **Kim Steenstrup Pedersen.** IKPLS: Improved Kernel Partial Least Squares and Fast Cross-Validation Algorithms for Python with CPU and GPU Implementations Using NumPy and JAX. *Journal of Open Source Software* 9 (99), 6533, 2024. DOI: 10.21105/joss.06533
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- Roberta Hunt, **Kim Steenstrup Pedersen**. The Phantom of the Elytra – Phylogenetic Trait Extraction from Images of Rove Beetles Using Deep Learning – Is the Mask Enough?. arXiv:2502.04541, 2025. <https://arxiv.org/abs/2502.04541>. DOI: 10.48550/arXiv.2502.04541
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