

Publications

Working papers

Steland, A. (2021). Consistency of extreme learning machines and regression under non-stationarity and dependence for ML-enhanced moving objects. [Preprint on arxiv](#).

Steland, A. and Pieters, Barth. E. (2021). Cross-Validation and Uncertainty Quantification for Randomized Neural Networks with Applications to Mobile Sensors. [Preprint on arxiv](#).

Published papers

- Deitsch, S., Buerhop-Lutz, C., Sovetkin, E., Steland, A., Gallwitz, F., Meier, A. and Riess, C. (2021). Segmentation of photovoltaic module cells in electroluminescence images. *Machine Vision and Applications*, Vol. 32, Article 84, [Download](#).
- Sovetkin, E. & Steland, A. (2019). Automatic processing and solar cell detection in photovoltaic electroluminescence images. *Integrated Computer-Aided Engineering*, Vol. 26(2), 123-137. [Download](#).
- Sommer, A. & Steland, A. (2019c). Multistage Acceptance Sampling under Nonparametric Dependent Sampling Designs. *Journal of Statistical Planning and Inference*, 199, 89-113.
- Fischer, G., Hupach, U., Schmauder, J., Sepanski, A., Sommer, A., Steland, A. & Vaaßen, W. (2018b). Failure assessments of PV systems demonstrate the importance of elective quality assurance. *PV-Tech Power*, 14, 70-81.
- Steland A. (2017). Fusing photovoltaic data for improved confidence intervals. *AIMS Energy*, 5,1, 125-148. [Download](#).
- Pepelyshev A., Sovetkin, E. and Steland, A. (2017). Panel-based stratified cluster sampling and analysis for photovoltaic outdoor measurements. *Applied Stochastic Models in Business and Industry*, 33, 1, 35-53, [OpenAccess](#).
- Prause, A. and Steland A. (2015). Detecting changes in spatial-temporal image data based on quadratic forms, In: *Stochastic Models, Statistics and Their Applications*, Eds. Steland A., Szajowski K. and Rafajlowicz E.
- Steland, A. (2015). Sampling Plans for Control-Inspection Schemes Under Independent and Dependent Sampling Designs with Applications to Photovoltaics, In: *Frontiers in Statistical Quality Control*, Eds. Schmid W. and Knoth S., Vol. 11, [arXiv](#), [Download](#)
- Pepelyshev, A., Steland, A. and Avellan-Hampe, A. (2014). Acceptance sampling plans for photovoltaic modules with two-sided specifications. *Progress in Photovoltaics*, Vol. 22(6), 603-611.
- Pepelyshev, A., Rafajlowicz, E. and Steland, A. (2013). Estimation of the quantile function using Bernstein-Durrmeyer polynomials. *Journal of Nonparametric Statistics*, Vol. 145, 45-73.
- Steland, A. (2012). Sequential data-adaptive bandwidth selection by cross-validation. *Communications in Statistics*, Vol. 41, 7, 1195-1219 [Download](#)
- Golyandina N., Pepelyshev A. and Steland A. (2012). New approaches to nonparametric density

estimation and selection of smoothing parameters. *Computational Statistics and Data Analysis*, Vol. 56, 7, 2208-2218.

- Meisen S., Pepelyshev A. and Steland A. (2012). Quality assessment in the presence of additional data. In: *Frontiers in Statistical Quality Control*, Eds. Lenz H.J. et al., Vol. 10. [Download](#)
- Akram A., Padmanabhan P. and Steland A. (2011). Resampling methods for the nonparametric and generalized Behrens-Fisher problems. *Sankhya Series A*, Vol. 73, 2, 267-302. [Download](#)
- Herrmann, W., Steland, A. (2010). Evaluation of Photovoltaic Modules Based on Sampling Inspection Using Smoothed Empirical Quantiles [DOI: 10.1002/pip.926]. *Progress in Photovoltaics*, 18 (1), 1-9. [Download](#)
- Herrmann, W., Steland, A. & Herff, W. (2010). Sampling Procedures for the Validation of PV Module Output Specification [DOI: 10.4229/24thEUPVSEC2009-4AV.3.70]. *Proceedings of the 24th European Photovoltaic Solar Energy Conference*, Hamburg, Germany, ISBN 3-936338-25-6, 3540-3547. [Download](#)
- Steland, A., Zähle, H. (2009). Sampling inspection by variables: nonparametric setting. *Statistica Neerlandica*, 63 (1), 101-123. [Download](#)
- Herrmann, W., Althaus, J., Steland, A. & Zähle, H. (2006). Statistical and experimental methods for assessing the power output specification of PV modules. *Proceedings of the 21st European Photovoltaic Solar Energy Conference*, 2416-2420. [Download](#)