List of Publications and Related Information

Refereed Journal Publications and Theses

[1] Jochen Bröcker. On reliability analysis of multi-categorical forecasts. *Nonlinear Processes in Geophysics*, 15(4):661–673, 2008.

[2] Sarah Hallerberg, Jochen Bröcker, and Holger Kantz. Prediction of extreme events. In Reik Donner, editor, *Nonlinear Time Series Analysis in the Geosciences—Applications in Climatology, Geodynamics, and Solar–Terrestrial Physics*, volume 112 of *Lecture Notes in Earth Sciences*. Springer, 2008.

[3] Jochen Bröcker. Some remarks on the reliability of categorical probability forecasts. *Monthly Weather Review*, 136:4488–4502, 2008.

[4] Jochen Bröcker and Leonard A. Smith. From ensemble forecasts to predictive distribution functions. *Tellus A*, 60:663–678, 2008.

[5] Jochen Bröcker and Leonard A. Smith. Increasing the reliability of reliability diagrams. *Weather and Forecasting*, 22(3):651–661, June 2007.

[6] Jochen Bröcker and Leonard A. Smith. Scoring probabilistic forecasts: The importance of being proper. *Weather and Forecasting*, 22(2):382–388, 2007.

[7] Jochen Bröcker. *Approximations and Applications of Nonlinear Filters*. PhD thesis, Universität Göttingen, 2003.

[8] Jochen Bröcker and Ulrich Parlitz. Analyzing communication schemes using methods from nonlinear filtering. *Chaos*, 13(3), 2003.

[9] Jochen Bröcker, Ulrich Parlitz, and Maciej Ogorzałek. Nonlinear noise reduction. *Proceedings of the IEEE*, 90(5):898–918, May 2002.

[10] Lucas Illing, Jochen Bröcker, Ljupco Kocarev, Ulrich Parlitz, and Henry D. I. Abarbanel. When are synchronization errors small? *Phys. Rev. E*, 66(3):036229, Sep 2002.

[11] Jochen Bröcker and Ulrich Parlitz. Efficient noncausal noise reduction for deterministic time series. *Chaos*, 11(2):319–326, 2001.

[12] Jochen Bröcker. *Rauschreduktion in Nichtlinearen Systemen.* Master's thesis, Drittes Physikalisches Institut, Universität Göttingen, 1999. (in german).

Submitted or in Revision

[1] Jochen Bröcker. Reliability, sufficiency, and the decomposition of proper scores. Technical report, Max-Planck-Institut für Physik komplexer Systeme, Dresden, 2008. arXiv:0806.0813 [physics.ao-ph].

[2] Jochen Bröcker, David Engster, and Ulrich Parlitz. Probabilistic evaluation of cluster weighted models. 2007. (submitted).

Lectures (selected)

[EXEV 08] *Performance Assessment of Probabilistic Forecasts.* International Workshop on Extreme Events, Palma de Mallorca, 2008.

[EMS 2008] *Data Assimilation Through Tracking.* 8th Annual Meeting of the European Meteorological Society, Amsterdam, The Netherlands, 2008

[NOLTA 2008] *Training and Scoring of Probabilistic Classifiers.* Proceedings of International Symposium on Nonlinear Theory and Its Applications (NOLTA'08), Budapest, Hungary, 2008.

[ISI Lisbon 2007] *Seeing Through Ensembles.* 56th Session of the International Statistical Institute, Lisbon.

[ECMWF 2007] *Evaluating Probabilistic Forecasts.* Third International Verification Methods Workshop, European Centre for Medium Range Weather Forecasting, 31. Jan 2007.

[ECMWF 2006] *Evaluating Probabilistic Forecasts for Continuous Variables.* Seminar organized by the Centre for the Analysis of Time Series at the European Centre for Medium Range Weather Forecasting, 16. May 2006.

[NOLTA 2005] *On comparing nonlinear filtering algorithms.* Proceedings of International Symposium on Nonlinear Theory and Its Applications (NOLTA'05), Bruges, Belgium, 2005.

[THORPEX 2004] (with L. Clarke, D. Kilminster, and L.A. Smith) *Scoring probabilistic forecasts.* First THORPEX International Science Symposium, Montréal, 2004.

[1] (with L. Clarke, D. Kilminster, and L.A. Smith) *Do multi-model ensemble forecasts yield added value?* First THORPEX International Science Symposium, Montréal, 2004.

[2] (with D. Kilminster, L. Clarke, M. Roulston, C. Ziemann, and L.A. Smith) *From mos to emos: Generalising model output statistics for full ensemble forecasts.* First THORPEX International Science Symposium, Montréal, 2004.

Collaboration and Consultancies

- European Centre for Medium Range Weather Forecasting (ECMWF), Reading, UK.

- Industry consultancies include EDFenergy and Scottish Southern Electricity.

- Co–organizer of workshops by the Centre for the Analysis of Time Series (CATS), London School of Economics.

- Collaboration with Prof. Leonard A. Smith, Centre for the Analysis of Time Series (CATS), London School of Economics.

- Collaboration with Prof. Kevin Judd, University of Western Australia.

Research Projects

- "Direct and Inverse Modelling in End-to-End Environmental Estimation (DIME)".
  For details see
  http://www.lse.ac.uk/collections/cats

- Involved in the successful proposal of "Nonlinear Analysis and Prediction Statistics from Time–Series and Ensemble–Forecast Realizations (NAPSTER)".
  For details see
  http://www.lse.ac.uk/collections/cats

Miscellaneous

- Referee for biometrica, Nonlinear Processes in the Geophysics, Monthly Weather Review, Chaos

- `EMTOOL`—A matlab toolbox for the interpretation, evaluation, and visualisation of ensemble forecasts. Available from `https://zephyr.lse.ac.uk/websvn`