

Curriculum vitae of Werner A. Stahel

Curriculum

- 1948 born September 24, 1948, in Zürich.
- 1973 Diplom (master) in mathematics, University of Zurich
- 1974-77 Assistent of Prof. H. Burla, Ecologist at the University of Zurich: Statistical Consulting for his group.
- 1977-83 Assistent of Prof. F. R. Hampel, Seminar für Statistik, Swiss Federal Institute of Technology (ETH), Zürich; Teaching assistant, consulting and research.
- 1981 Ph.D. in mathematics, ETH Zurich.
- 1983-84 Postdoctoral Member of Technical Staff at AT&T Bell Laboratories, Murray Hill, N.J., U.S.A. (2 months summer visitor at the Department of Statistics, Stanford University, Stanford, California): research in applied statistics and data analysis.
- 1984- Member of scientific staff at Seminar für Statistik, ETH Zurich: Head of the Statistical Consulting Service, Head of an extensive postgraduate course on applied statistics (Nachdiplomkurs / Weiterbildungsgang in angewandter Statistik), Studies Advisor of the Master in Statistics program (2007-2010), Teaching, Research.
- 2006 Nomination as Titular-Professor of ETH Zurich

Books

- 1986 F. R. Hampel, E. M. Ronchetti, P. J. Rousseeuw, W. A. Stahel: Robust Statistics: The Approach Based on Influence Functions. Wiley, N.Y. (Russian translation 1989).
- 1995, 1999, 2000, 2002, 2007 W. A. Stahel: Statistische Datenanalyse. Eine Einführung für Naturwissenschaftler. Editions 1-5. Vieweg, Braunschweig, Germany.

Papers in refereed journals

- 1974 H. Burla, H. Schenker, W. Stahel: Das Dispersionsmuster von Teichmuscheln (Anodonta) im Zürichsee. *Oecologia* 17, 131-40.
- 1976 H. Burla, B. Pabst, W. Stahel: Vorkommen von *Astropecten aranci-acus* (Asteroidea, Echinodermata) in Abhängigkeit von Umweltbedingungen. *Helgolaender wiss. Meeresunters.* 28, 167-82.
- 1983 H. Burla, W. Stahel: Altitudinal variation in *Arianta arbustorum* (Mollusca, Pulmonata) in the Swiss Alps. *Genetica* 62, 95-108.
- 1986 B. Federer, A. Waldvogel, W. Schmid, H. H. Schiesser, F. Hampel, M. Schweingruber, W. Stahel, J. Bader, J.-F. Mezeix, N. Doras, G. D'Aubigny, G. DerMegreditchian, D. Vento: Main results of Grossversuch IV. *J. Climate Appl. Meteorology* 25, 917-957.
- 1987 W. A. Stahel: Estimation of a covariance matrix with location: Asymptotic formulas and optimal B-robust estimators. *J. Multivariate Analysis* 22, 296-312.
- 1988 L. Schaub, W. A. Stahel, J. Baumgärtner, V. Delucchi: Elements for assessing mirid (Heteroptera: Miridae) damage threshold on apple fruits. *Crop Protection* 7, 118-124.
- 1990 P. Grambsch, W. A. Stahel: Forecasting demand for special telephone services: A case study. *J. Forecasting* 6, 53-64.
- 1991 J. S. Samra, W. A. Stahel, H. Künsch: Modelling tree growth sensitivity to soil sodicity with spatially correlated observations. *Soil Science Society of America Journal* 55, 851-856
- 1992 J. Bader, W. A. Stahel, W. Schmid: Further Results of Grossversuch IV: The Effect of the First Rocket Launched into a Potential Hail Cell. *J. Applied Meteorology*, 31, 700-707.
- 1992 R. A. Maronna, W. A. Stahel, V. J. Yohai: Bias-robust estimators of multivariate scatter based on projections. *J. Multivariate Analysis*, 42, 141-161.
- 1993 A. F. Ruckstuhl, W. A. Stahel, K. Dressler: Robust Estimation of Term Values in High-Resolution Spectroscopy: Application to the $e^3\Sigma_u^+ \rightarrow a^3\Sigma_g^+$ Spectrum of T_2 . *J. Molecular Spectroscopy* 160, 434-445.
- 1994 W. A. Stahel, A. F. Ruckstuhl, K. Dressler, P. Senn: Robust Estimation in the Analysis of Complex Molecular Spectra. *J. Amer. Statist. Assoc.* 89, 788-795.
- 1995 K. Weingartner, C. Keller, W. A. Stahel, U. Baltensperger and H. Burtscher: Field Study of Emission Factors in a Road Tunnel. *Journal of Aerosol Science Suppl.*

- 1995 J. Staehelin, K. Schläpfer, T. Bürgin, U. Steinemann, S. Schneider, D. Brunner, M. Bäumle, M. Meier, C. Zahner, S. Keiser, C. Keller, W. A. Stahel: Emission factors from road traffic from a tunnel study (Gubrist tunnel, Switzerland). Part I: concept and first results. *Science Total Environment* 169, 141-147.
- 1995 S. Magyar-Lehmann, C. Savi, W. Stahel, M. Schachner: Behaviour of small inhibitory interneurons in early postnatal mouse cerebellar microexplant cultures: A video time-lapse analysis. *Europ. J. Neuroscience* 7, 1449-1459.
- 1996 H. Burla, W. Stahel: Mating variables in three native *Chymomyza* species of Switzerland (Diptera: Drosophilidae). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 69, 173-187.
- 1996 N. D. Kalavrezos, K.W. Grätz, H.F. Sailer, W.A. Stahel: Correlation of imaging and clinical features in the assessment of mandibular invasion of oral carcinomas. *Int. J. Oral Maxillofac. Surg.* 25, 439-445.
- 1996 J. Staehelin, R. Friedrich, C. John, C. Keller, W. Stahel, K. Schläpfer: Comparison of the Emission Factors of Road Traffic from the Gubrist Tunnel Study with the IER Model. *Proc. of EUROTRAC Symp. '96*, Computational Mechanics Publications, Southampton.
- 1997 K. Weingartner, C. Keller, W. A. Stahel, H. Burtscher and U. Baltensperger: Aerosol Emission in a Road Tunnel. *Atmospheric Environment* 31, 451-462.
- 1997 M. Funk, R. Morelli, W. Stahel: Mass balance of Griesgletscher 1961 – 1994: Different methods of determination. *Zeitsch. Gletscherkunde und Glazialgeologie* 33, 41-56.
- 1997 W. A. Stahel, A. Welsh: Approaches to Robust Estimation in the Simplest Variance Components Model. *J. Statistical Planning and Inference* 57, 295-319.
- 1997 Johannes Staehelin, Christian Keller, Werner A. Stahel, Kurt Schläpfer, Urs Steinemann, Toni Bürgin, Stefan Schneider: Modelling Emission Factors of Road Traffic from a Tunnel Study. *Environmetrics* 8, 219-239.
- 1998 Johannes Staehelin, Christian Keller, Werner A. Stahel, Kurt Schläpfer, Samuel Wunderli: Emission factors from road traffic from a tunnel study (Gubrist tunnel, Switzerland). Part III: Results of organic compounds, SO₂ and speciation of organic exhaust emission. *Atmospheric Environment* 32, 999-1009.
- 1999 Astrid Oberson, D.K. Friesen, H. Tiessen, C. Morel, W. Stahel: Phosphorus status and cycling in native savanna and improved

- pastures on an acid low-P Colombian Oxisol. *Nutrient Cycling in Agroecosystems* 55, 77-88.
- 2001 E. Limpert, W. A. Stahel, M. Abbt: Log-normal Distributions across the Sciences: Keys and Clues. *BioScience* 51, 341-352.
- 2001 M. Riediker, C. Monn, T. Koller, W. A. Stahel, B. Wüthrich: Air pollutants enhance rhinoconjunctivitis symptoms in pollen-allergic individuals. *Annals of Allergy, Asthma, & Immunology* 87, 311-318.
- 2001 R. Gehrig, C. Hüglin, W. Devos, P. Hofer, J. Kobler, W. A. Stahel, U. Baltensberger, C. Monn: Contribution of road traffic to ambient fine particle concentrations (PM₁₀) in Switzerland. *Int. J. Vehicle Design*, 27, 55-64.
- 2001 J. Staehelin, R. Locher, S. Mönkeberg, W. A. Stahel: Contribution of road traffic emissions to ambient air concentrations of hydrocarbons: the interpretation of monitoring measurements in Switzerland by Principal Component Analysis and road tunnel measurements. *Int. J. Vehicle Design*, 27, 161-172.
- 2002 Roman W. Lutz, Werner A. Stahel, Werner K. Lutz: Statistical procedures to test for linearity and estimate threshold doses for tumor induction with nonlinear dose-response relationships in bioassays for carcinogenicity. *Regulatory Toxicology and Pharmacology* 36, 331-337.
- 2004 Werner A. Stahel: Purposes and strategies in regression analysis. *J. Statistical Planning and Inference* 122, 175-186.
- 2004 Patrick Gomez, Werner A. Stahel, Brigitta Danuser: Respiratory Responses during Affective Picture Viewing. *Biological Psychology* 67, 359-373.
- 2005 Christina A. Colberg, Bruno Tona, Giovanni Catone, Christian Sangiorgio, Werner A. Stahel, Peter Sturm, Johannes Staehelin: Statistical analysis of the vehicle pollutant emissions derived from several European road tunnel studies. *Atmospheric Environment* 39, 2499-2511.
- 2005 Christina A. Colberg, Bruno Tona, Werner A. Stahel, Markus Meier, Johannes Staehelin: Comparison of a road traffic emission model (HBEFA) with emissions derived from measurements in the Gubrist road tunnel, Switzerland. *Atmospheric Environment* 39, 4703-4714.
- 2005 Antoine Pralong, Christof Birrer, Werner A. Stahel, and Martin Funk: On the predictability of ice avalanches. *Nonlinear Processes in Geophysics* 12, 849-861.
- 2005 M. Wolbers, W. A. Stahel: Linear Unmixing of Multivariate Observations: A Structural Model. *J. Amer. Statist. Assoc.* 100, 1328-1342.

- 2006 Simon Egli, Martina Peter, Christoph Buser, Werner Stahel, Francois Ayera: Mushroom picking does not impair future harvests – results of a long-term study in Switzerland. *Biological Conservation* 129, 271-276
- 2006 Wöhrnschimmel, H., M?rquez, C., Mug?ca, V., Stahel, W. A., Staehelin, J., C?rdenas, B., Blanco, S.: Vertical profiles and receptor modeling of volatile organic compounds over Southeastern Mexico City. *Atmospheric Environment* 40, 5125-36
- 2007 Rahel C. Brändli, Thomas D. Bucheli, Thomas Kupper, Reinhard Furrer, Werner A. Stahel, Franz X. Stadelmann and Joseph Taradellas: Organic pollutants in compost and digestate. Part 1. Polychlorinated biphenyls, polycyclic aromatic hydrocarbons and molecular markers. *J. Environmental Monitoring* 9, 456-64
- 2007 Mäder, J. A., J. Staehelin, D. Brunner, W. A. Stahel, I. Wohltmann, and T. Peter: Statistical modeling of total ozone: Selection of appropriate explanatory variables, *J. Geophys. Res.*, 112
- 2007 Dejung, S., Martin Wegelin, Ivan Fuentes, Gabriela Almanza, Ruth Jarro, Lizeth Navarro, Gina Arias, Evelin Urquieta, Abraham Torrico, Wilma Fenandez, Mercedes Iriarte, Christof Birrer and Werner A. Stahel: Effect of solar water disinfection (SODIS) on model microorganisms under improved and field SODIS conditions. *J. Water Supply Res. Technology (AQUA)* 56 (4), 245-256
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- 2009 M. Brink, M. Basner, C. Schierz, M. Spreng, K. Scheuch, G. Bauer, W.A. Stahel: Determining physiological reaction probabilities to noise events during sleep. *Somnologie* 2009, p. 236-243.
- 2009 M. Tableman, W.A. Stahel: Nonparametric methods for employment termination times with competing causes. *Statistics and Its Interface* 2, 37-44.
- 2010 H. Wöhrnschimmel, M. Magana, W.A. Stahel, S. Blanco, S. Acuna, J. M. Perez, S. Gonzalez, V. Gutierrez, S. Wakamatsu, and B. Cardenas: Measurements and receptor modeling of volatile organic compounds in south-eastern Mexico City, 2000-2007. *Atmos. Chem. Phys.*, 10, 9027-9037.
- 2010 J.A. Mäder, J. Staehelin, T. Peter, D. Brunner, H.E. Rieder, and W.A. Stahel: Evidence for the effectiveness of the Montreal Protocol to protect the ozone layer. *Atmos. Chem. Phys.*, 10, 12161 - 12171.

- 2011 Manuel Koller and Werner A. Stahel: Sharpening Wald-type inference in robust regression for small samples. *Computational Statistics & Data Analysis*, 55, 2504-2515.
- 2011 Fabio Sigrist and Werner A. Stahel: Using the censored gamma distribution for modeling fractional response variables with an application to Loss Given Default. *ASTIN Bulletin*, 41, 673-710.
- 2011 Eckhard Limpert and Werner A. Stahel: Problems with Using the Normal Distribution – and Ways to Improve Quality and Efficiency of Data Analysis. *PLoS ONE* 6(7).
- 2012 Fabio Sigrist, Hans R. Knsch, and Werner A. Stahel. A dynamic non-stationary spatio-temporal model for short term prediction of precipitation. *Ann. Appl. Stat.* 6, 1452-1477.
- 2012 Fabio Sigrist, Hans R. Knsch, and Werner A. Stahel. An SPDE Based Spatio-temporal Model for Large Data Sets with an Application to Postprocessing Precipitation Forecasts. Preprint

Books edited

- 1991 W. A. Stahel, S. Weisberg, eds.: *Directions in Robust Statistics and Diagnostics*. Springer, N.Y.
- 1993 S. Morgenthaler, E. Ronchetti, W. A. Stahel, eds.: *New Directions in Statistical Data Analysis and Robustness*. Birkhäuser, Basel.
- 2000 Luisa Turrin Fernholz, Stephan Morgenthaler, Werner Stahel, eds.: *Statistics in Genetics and in the Environmental Sciences*. Birkhäuser, Basel.