

# Michael Schemper

1952 born in Vienna, Austria

1972 - 1977 studied *Statistics* at Vienna University (MSc 1976, PhD 1977)

1977 - 1991 founded and headed a *Unit for Biostatistics and Documentation* at the former *1st Dept. of Surgery* of Vienna University

1985 Habilitation (Assoc. Prof.) for Medical Statistics and Documentation at Vienna University.

1987/88 Visiting Associate Professor at the *Dept. of Biomathematics (MDACC)* of the University of Texas in Houston, USA.

Since 1991 Professor of Clinical Biostatistics. Founded, and headed until 2015, the *Section for Clinical Biometrics* at the *Department of Medical Computer Sciences* of the University of Vienna (since 2010 *Center for Medical Statistics, Informatics and Intelligent Systems, CeMSIIS*, of the Medical University of Vienna)

Between 1992 and 2015 often additionally chaired the larger organizational unit such as *CeMSIIS* to which the *Section for Clinical Biometrics* had belonged.

## Professional functions:

1988 - 1990 President of the *Vienna Biometric Section*

1982 - 1985 and again 2006 - 2009 Council Member of the *International Biometric Society (IBS)*

1994 - 1999 Member of the Editorial Advisory Committee for *Biometrics*

1996 - 1997 President of the Austro-Swiss Region (ROeS) of the IBS

1997 - 2000 Member of the Executive Committee of the *International Society for Clinical Biostatistics (ISCB)*

2000 - 2015 Member of the Ethics Committee of the Medical University of Vienna

2006 - 2013 Associate Editor of *Statistics in Medicine*

2013 - 2014 Member of the Executive Board of the IBS

Chairman for the scientific program committees for the international conferences ISCB-17 in Budapest, 1996, ISCB-26 in Szeged, Hungary, 2005, and for the ROeS - Seminar in Vienna, 1997

Chairman of the local organizing committee for the international conference ISCB-35 in Vienna, 2014

Honorary Lifetime Memberships of ISCB and of ROeS

## Selected methodological papers (1984-2024) in descending chronologic order

Number of citations according to [Google Scholar](#) for highly cited papers as of Jan 24<sup>th</sup>, 2024:  
50-199, 200-999, 1000-3000

Gleiss, A., Gnant, M., Schemper, M.  
Explained variation and degrees of necessity and of sufficiency for competing risks survival data  
(2024) *Biometrical Journal*, 66 (2), 2300140 (pp. 1-17; Open Access)

Gleiss, A., Henderson, R., Schemper, M.  
Degrees of necessity and of sufficiency: Further results and extensions, with an application to covid-19 mortality in Austria  
(2021) *Statistics in Medicine*, 40 (14), pp. 3352-3366. (Open Access)

Gleiss, A., Schemper, M.  
Quantifying degrees of necessity and of sufficiency in cause-effect relationships with dichotomous and survival outcomes  
(2019) *Statistics in Medicine*, 38 (23), pp. 4733-4748. (Open Access)

Gleiss, A., Gnant, M., Schemper, M.  
Explained variation in shared frailty models  
(2018) *Statistics in Medicine*, 37 (9), pp. 1482-1490.

[Dunkler, D., Ploner, M., Schemper, M., & Heinze, G.](#)  
[Weighted Cox Regression Using the R Package coxphw.](#)  
(2018) *Journal of Statistical Software*, 84(2), pp. 1–26. Cited 103 times.

Gleiss, A., Zeillinger, R., Braicu, E.I., Trillsch, F., Vergote, I., Schemper, M.  
Statistical controversies in clinical research: The importance of importance  
(2016) *Annals of Oncology*, 27 (7), pp. 1185-1189. (Open Access)

Wakounig, S., Heinze, G., Schemper, M.  
Non-parametric estimation of relative risk in survival and associated tests  
(2015) *Statistical Methods in Medical Research*, 24 (6), pp. 856-870.

Gleiss, A., Lassi, M., Blümel, P., Borkenstein, M., Kapelari, K., Mayer, M., Schemper, M., Häusler, G.  
Austrian height and body proportion references for children aged 4 to under 19 years  
(2013) *Annals of Human Biology*, 40 (4), pp. 324-332.

[Schemper, M., Kaider, A., Wakounig, S., Heinze, G.](#)  
[Estimating the correlation of bivariate failure times under censoring](#)  
(2013) *Statistics in Medicine*, 32 (27), pp. 4781-4790. Cited 53 times.

[Steyerberg, E., Schemper, M., Harrell, F.](#)  
[Logistic regression modeling and the number of events per variable: selection bias dominates](#)  
(2011) *Journal of Clinical Epidemiology*, 64 (12), pp. 1464-1465. Cited 56 times.

Dunkler, D., Schemper, M., Heinze, G.  
Gene selection in microarray survival studies under possibly non-proportional hazards  
(2010) *Bioinformatics*, 26 (6), pp. 784-790.

Schemper, M., Wakounig, S., Heinze, G.  
The estimation of average hazard ratios by weighted Cox regression  
(2009) *Statistics in Medicine*, 28 (19), pp. 2473-2489. Cited 292 times.

Lehr, S., Schemper, M.  
Parsimonious analysis of time-dependent effects in the Cox model  
(2007) *Statistics in Medicine*, 26 (13), pp. 2686-2698.

Dunkler, D., Michiels, S., Schemper, M.  
Gene expression profiling: Does it add predictive accuracy to clinical characteristics in cancer prognosis?  
(2007) *European Journal of Cancer*, 43 (4), pp. 745-751. Cited 111 times.

Nardi, A., Schemper, M.  
Comparing Cox and parametric models in clinical studies  
(2003) *Statistics in Medicine*, 22 (23), pp. 3597-3610. Cited 183 times.

Heinze, G., Gnant, M., Schemper, M.  
Exact Log-Rank Tests for Unequal Follow-Up  
(2003) *Biometrics*, 59 (4), pp. 1151-1157. Cited 64 times.

Schemper, M.  
Predictive accuracy and explained variation  
(2003) *Statistics in Medicine*, 22 (14), pp. 2299-2308. Cited 162 times.

Heinze, G., Schemper, M.  
Comparing the importance of prognostic factors in Cox and logistic regression using SAS  
(2003) *Computer Methods and Programs in Biomedicine*, 71 (2), pp. 155-163. Cited 52 times.

**Heinze, G., Schemper, M.**  
**A solution to the problem of separation in logistic regression**  
(2002) *Statistics in Medicine*, 21 (16), pp. 2409-2419. Cited 2135 times

Mittlböck, M., Schemper, M.  
Explained variation for logistic regression—small sample adjustments, confidence intervals and predictive precision  
(2002) *Biometrical Journal*, 44 (3), pp. 263-272.

Heinze, G., Schemper, M.  
A solution to the problem of monotone likelihood in Cox regression  
(2001) *Biometrics*, 57 (1), pp. 114-119. Cited 364 times.

Schemper, M., Henderson, R.  
Predictive accuracy and explained variation in Cox regression  
(2000) *Biometrics*, 56 (1), pp. 249-255. Cited 275 times.

Nardi, A., Schemper, M.  
New residuals for Cox regression and their application to outlier screening  
(1999) *Biometrics*, 55 (2), pp. 523-529. Cited 86 times.

Mittlböck, M., Schemper, M.  
Computing measures of explained variation for logistic regression models  
(1999) *Computer Methods and Programs in Biomedicine*, 58 (1), pp. 17-24.

Schemper, M., Kaider, A.  
A new approach to estimate correlation coefficients in the presence of censoring and proportional hazards  
(1997) Computational Statistics and Data Analysis, 23 (4), pp. 467-476.

Schemper, M., Heinze, G.  
Probability imputation revisited for prognostic factor studies  
(1997) Statistics in Medicine, 16 (1-3), pp. 73-80.

Mittlböck, M., Schemper, M.  
Explained variation for logistic regression  
(1996) Statistics in Medicine, 15 (19), pp. 1987-1997. Cited 453 times.

Schemper, M., Stare, J.  
Explained variation in survival analysis  
(1996) Statistics in Medicine, 15 (19), pp. 1999-2012. Cited 266 times.

**Schemper, M., Smith, T.L.**  
**A note on quantifying follow-up in studies of failure time**  
**(1996) Controlled Clinical Trials, 17 (4), pp. 343-346. Cited 2340 times.**

Schemper, M.  
The relative importance of prognostic factors in studies of survival  
(1993) Statistics in Medicine, 12 (24), pp. 2377-2382. Cited 121 times.

Schemper, M.  
Further results on the explained variation in proportional hazards regression  
(1992) Biometrika, 79 (1), pp. 202-204.

Schemper, M.  
Cox analysis of survival data with nonproportional hazard functions (1992) Journal of the Royal Statistical Society: Series D (The Statistician), 41(4), pp. 455-465. Cited 222 times.

Schemper, M.  
Generalized Rank Transformations for Tests of Survival  
(1991) Biometrical Journal, 33 (1), pp. 73-79.

Schemper, M.  
Simple Nonparametric Inference for Monotonic Processes  
(1991) Biometrical Journal, 33 (4), pp. 387-392.

Schemper, M.  
The explained variation in proportional hazards regression  
(1990) Biometrika, 77 (1), pp. 216-218. Cited 120 times.

Schemper, M., Smith, T.L.  
Efficient evaluation of treatment effects in the presence of missing covariate values  
(1990) Statistics in Medicine, 9 (7), pp. 777-784. Cited 74 times.

Schemper, M.  
A Closed-form Jackknife Solution for the Behrens-Fisher Problem  
(1989) Biometrical Journal, 31 (8), pp. 931-939.

Schemper, M.  
Non-parametric analysis of treatment—covariate interaction in the presence of censoring  
(1988) *Statistics in Medicine*, 7 (12), pp. 1257-1266.

Schemper, M.  
One- and Two-Sample Tests of Kendall's  $\tau$   
(1987) *Biometrical Journal*, 29 (8), pp. 1003-1009.

Schemper, M.  
Nonparametric estimation of variance, skewness and kurtosis of the distribution of a statistic  
by jackknife and bootstrap techniques  
(1987) *Statistica Neerlandica*, 41 (1), pp. 59-64.

Schemper, M.  
General Derivation of Intraclass Correlation Coefficients  
(1986) *Biometrical Journal*, 28 (4), pp. 485-489.

Schemper, M.  
A generalized Friedman test for data defined by intervals  
(1984) *Biometrical Journal*, 26 (3), pp. 305-308.

Schemper, M.  
A Generalization of the Intraclass Tau Correlation for Tied and Censored Data  
(1984) *Biometrical Journal*, 26 (6), pp. 609-617

Schemper, M.  
Exact Test Procedures for Generalized Kendall Correlation Coefficients  
(1984) *Biometrical Journal*, 26 (4), pp. 399-406.