

# A Bibliography on Loss Reserving

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## Preface

This bibliography has been compiled from publications which are available to the author and from references given in these publications. Some of the references are incomplete and others may be missing.

Any suggestions for corrections or additions to this bibliography are welcome and should be sent, if possible with copies of the references commented on, to the author.

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## Handbooks and Collected Works

- [1971] *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition.* Amsterdam: Nederlandse Reassurantie Groep NV.
- [1974] *Claims Provisions for Non-Life Insurance Business. Proceedings of a symposium organized by the Institute of Mathematics and its Applications held in London on May 22nd, 1974.*
- [1978] *IBNR – Proc. First Meeting Contactgroup Actuarial Sciences.* (F. De Vylder and M. J. Goovaerts, Eds.)
- [1981] *Loss Reserving Methods.* Rotterdam: Nationale Nederlanden.
- [1988] *Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Reserves.* New York: Casualty Actuarial Society.
- [1989] *Claims Reserving Manual.* London: Institute of Actuaries.
- [1989] *Foundations of Casualty Actuarial Science.* New York: Casualty Actuarial Society.
- [1989] *Late claims reserves in reinsurance.* Zürich: Swiss Reinsurance Company.
- [1991] *Actuarial Standard of Practice No. 9, Documentation and Disclosure in Property and Casualty Insurance Ratemaking, Loss Reserving, and Valuations (Doc. No. 027).* Actuarial Standards Board of American Academy of Actuaries.

- [1994] *Die Methode von Bornhuetter und Ferguson zur Bestimmung von Schadenrückstellungen*. Actuarial Services INBR–Kurs 1994.
- [1996] *Foundations of Casualty Actuarial Science*. Second Edition. New York: Casualty Actuarial Society.
- [1997] *Claims Reserving Manual*. Second Edition. London: Institute of Actuaries.
- [2004] *Handbuch zur Schadenreservierung*. Karlsruhe: Verlag Versicherungswirtschaft.
- [2012] *Handbuch zur Schadenreservierung*. Second Edition. Karlsruhe: Verlag Versicherungswirtschaft.

## Monographs and Papers

### Abbott, W. M., et al.

- [1974] *Some thoughts on technical reserves and statutory returns in general insurance*. J. Inst. Actuar. **101**, 217–283.

### Abdallah, A. (see also M. P. Côté)

### Abdallah, A., Boucher, J. P., and Cossette, H.

- [2015] *Modeling dependence between loss triangles with hierarchical Archimedean copulas*. ASTIN Bull. **45**, 577–599.

### Accomando, F., and Weissner, E.

- [1988] *Report lag distributions: Estimation and application to IBNR claims*. In: *Transcripts of the 1988 CAS Loss Reserve Seminar*, pp. 1038–1133. Arlington (VA), CAS.

### Adams, J. H.

- [2007] *A discussion of 'Nonlinear regression model of incurred but not reported losses' by Scott Stelljes*. In: *CAS E–Forum Summer 2007*.

### Adams, K. H. S.

- [2013] *Chain ladder reserving methods for liabilities with per occurrence limits*. In: *CAS E–Forum Fall 2013*.

### Adler, M., and Kline, C. D. jr.

- [1988] *Evaluating bodily injury liabilities using a claims closure model*. In: *Evaluating Insurance Company Liabilities*. CAS Discussion Paper Program, pp. 1–66.

### Agbeko, T., Hiabu, M., Martinez Miranda, M. D., Nielsen, J. P., and Verrall, R.

- [2014] *Validating the double chain ladder stochastic claims reserving model*. Variance **8**, 138–160.

### Agin, S. G. (see D. F. Mohrman)

### Ajne, B.

- [1974] *On the statistical estimation of costs of claims*. ASTIN Bull. **7**, 181–191.
- [1989] *Exponential run-off*. In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.
- [1993] *Additivity of chain-ladder projections revisited*. In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 231–239.
- [1994] *Additivity of chain-ladder projections*. ASTIN Bull. **24**, 313–318.

### Alai, D. H., and Wüthrich, M. V.

- [2009] *Modelling small and large claims together*. Preprint.

### Albrecht, P.

- [1983] *Parametric multiple regression risk models: Some connections with IBNR*. Insurance Math. Econom. **2**, 69–73.

**Alfermann, B., Radtke, M., and Reich, A.**

[2004] *Controlling*. In: *Handbuch zur Schadenreservierung*, pp. 65–70. Karlsruhe: Verlag Versicherungswirtschaft.

**Andrade e Silva, J. M.** (see P. J. R. Pinheiro)**Andrés-Sánchez, J. de**

[2007] *Claims reserving with fuzzy regression and Taylor's geometric separation method*. Insurance Math. Econom. **40**, 145–163.

**Antonio, K.** (see also M. Pigeon)**Antonio, K., and Plat, R.**

[2014] *Micro-level stochastic loss reserving for general insurance*. Scand. Actuar. J., 649–669.

**Apaydin, A., and Baser, F.**

[2010] *Hybrid fuzzy least-squares regression analysis in claims reserving with geometric separation method*. Insurance Math. Econom. **47**, 113–122.

**Arbenz, P., and Salzmann, R.**

[2014] *On a combination of multiplicative and additive stochastic loss reserving methods*. In: *CAS Forum Summer 2014*, pp. 5–43.

**Archer-Lock, P.** (see C. J. W. Czapiewski)**Arjas, E.** (see also S. Haastrup)

[1989] *The claims reserving problem in non-life insurance: Some structural ideas*. ASTIN Bull. **19**, 139–152.

**Ashab, M. Q.** (see G. G. Venter)**Ashe, F. R.** (see also G. C. Taylor)

[1982] *A relationship between outstanding claims and speeds of finalization*. Inst. Actuar. Austral. Gen. Insurance Sem. **3**, 140–154.

[1986] *An essay at measuring the variance of estimates of outstanding claim payments*. ASTIN Bull. **16**, S99–S113.

**Ashenbrenner, C. X.**

[2010] *Crop insurance reserving*. In: *CAS E-Forum Fall 2010*.

**Atherino, C. X., Pizzinga, A., and Fernandes, C.**

[2010] *A row-wise stacking of the runoff triangle – State space alternatives for IBNR reserve prediction*. ASTIN Bull. **40**, 917–946.

**Au, A.** (see S. P. D'Arcy)**Avanzi, B., Taylor, G., and Wong, B.**

[2017] *Correlations between insurance lines of business – An illusion of a real phenomenon? Some methodological considerations*. ASTIN Bull. **46**, 225–263.

**Badounas, I.** (see G. Pitselis)**Balcarek, R. J.**

[1966] *Effect of loss reserve margins in calendar year results*. Proc. CAS **53**, 1–16.

[1972] *Loss reserving in the Sixties*. Proc. CAS **59**, 18–25.

**Balester, J. C., and Kirschner, G. S.**

[2013] *Structured tools to help organize one's thinking when performing or reviewing a reserve analysis*. In: *CAS E-Forum Fall 2013*.

**Ballweg, Z. A.** (see S. J. Forray)

**Balzer, L. A., and Benjamin, S.**

[1980] *Dynamic response of insurance systems with delayed profit/loss sharing feedback and persisting unpredicted claims.* J. Inst. Actuar. **109**, 285–316.

**Bardis, E. T., Gwilliam, C. L., Lowe, S. P., and Malhotra, A. S.**

[2006] *Considerations regarding standards of materiality in estimates of outstanding liabilities.* In: *CAS Forum Fall 2006*, pp. 1–60.

**Bardis, E. T., Majidi, A., and Murphy, D. M.**

[2009] *Manually adjustable link ratio model for reserving.* In: *CAS E-Forum Fall 2008*.

[2009] *Flexible factor chain ladder model – A stochastic framework for reasonable link ratio selections.* In: *CAS E-Forum Summer 2009*.

**Bardis, M.** (see L. Llaguno)

**Bardis, M. T., Majidi, A., and Murphy, D. M.**

[2013] *A family of chain-ladder factor models for selected link ratios.* Variance **6**, 143–160.

**Barnett, G., Odell, D., and Zehnwirth, B.**

[2008] *Meaningful intervals* In: *CAS E-Forum Fall 2008*.

**Barnett, G., and Zehnwirth, B.**

[1997] *Standard errors and diagnostics for link ratio techniques.* In: *Proc. 28th Int. ASTIN Colloquium Cairns 1997*, pp. 385–412.

[1998] *Best estimates for reserves.* In: *CAS Forum Fall 1998*, pp. 1–54.

[2000] *Best estimates for reserves.* Proc. CAS **87**, 245–321.

[2001] *Reserving for multiple excess layers.* ASTIN Colloquium, Washington.

[2008] *The need for diagnostic assessment of bootstrap predictive models.* Insureware.

**Barnett, G., Zehnwirth, B., and Dubossarsky, E.**

[2005] *When can accident years be regarded as development years?* Proc. CAS **92**, 239–256.

**Baser, F.** (see A. Apaydin)

**Bass, I. K., and Khury, C. K.**

[2003] *Probabilistic framework for evaluating materiality and variability in loss reserve estimates.* In: *CAS Forum Fall 2003*, pp. 1–39.

**Basu, S.** (see P. Shi)

**Bauwelinckx, T.** (see M. J. Goovaerts)

**Bear, R. A.**

[1992] *Discussion of Pinto and Gogol (1987).* Proc. CAS **79**, 134–148.

**Beard, R. E.**

[1969] *Technical reserves in non-life insurance with particular reference to motor insurance.* ASTIN Bull. **5**, 177–198.

[1974] *Claims provisions for non-life insurance business: Some historical, theoretical and practical aspects.* In: *Claims Provisions for Non-Life Insurance Business*, pp. 15–.

[1977] *Verification of outstanding claims provisions: Separation technique.* ASTIN Bull. **9**, 26–32.

**Beard, R. E., Pentikäinen, T., and Pesonen, E.**

[1984] *Risk Theory.* London – New York: Chapman and Hall.

**Beirlant, J.** (see T. Hoedemakers)

**Bender, R. K.**

- [2000] *Portfolio decomposition: A building block approach to loss development*. In: *CAS Forum Fall 2000*, pp. 231–280.

**Benedikt, V.**

- [1969] *Estimating incurred claims*. *ASTIN Bull.* **5**, 210–212.

**Benjamin, S.** (see L. A. Balzer)

**Benjamin, S., and Eagles, L. M.**

- [1984] *Reserves in Lloyd's and the London Market*. *J. Inst. Actuar.* **113**, 197–256.  
[1989] *A curve fitting method and a regression method*. In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.  
[1997] *A regression method*. In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.

**Benktander, G.**

- [1976] *An approach to credibility in calculating IBNR for casualty excess reinsurance*. *Actuar. Rev.* **3**, No. 2, 7.

**Bennington, T. L.** (see M. D. Green)

**Berquist, J. R.**

- [1980] *Discussion of Khury (1980)*. *Proc. CAS* **67**, 22–23.

**Berquist, J. R., and Sherman, R. E.**

- [1977] *Loss reserve adequacy testing: A comprehensive systematic approach*. *Proc. CAS* **64**, 123–184.

**Berry, C. H.**

- [1980] *A method for setting retro reserves*. *Proc. CAS* **67**, 226–238.

**Bhagavaluta, R. R., Brouwn, B. Z., and Murphy, K.**

- [1994] *Estimation of liabilities due to interactive waste sites*. In: *CAS Forum Summer 1994*, pp. 301–365.

**Bill, R.**

- [1981] *Discussion of Kittel (1981)*. *CAS Discussion Paper Program*, pp. 332–343.

**Björkwall, S.** (see also R. J. Verrall)

**Björkwall, S., Hössjer, O., and Ohlsson, E.**

- [2009] *Non-parametric and parametric bootstrap techniques for age-to-age development factor methods in stochastic claims reserving*. *Scand. Actuar. J.*, 306–331.  
[2010] *Bootstrapping for the separation method in claims reserving*. *ASTIN Bull.* **40**, 845–887.

**Björkwall, S., Hössjer, O., Ohlsson, E., and Verrall, R.**

- [2011] *A generalized linear model with smoothing effects for claims reserving*. *Insurance Math. Econom.* **49**, 27–37.

**Blanchard, R. S.**

- [2000] *Considerations in the calculation of premium deficiency reserves (under U. S. accounting rules)*. In: *CAS Forum Fall 2000*, pp. 1–33.

**Bloom, L.**

- [2015] *Interpolation hacks and their efficacy*. In: *CAS E-Forum Fall 2015*.

**Bloom, L., and Patrik, L.**

- [2013] *A methodology for avoiding the pitfalls of excess loss development*. In: *CAS E-Forum Fall 2013*.

**Blum, K. A., and Otto, D. J.**

[1998] *Best estimate loss reserving: An actuarial perspective.* In: *CAS Forum Fall 1998*, pp. 55–101.

**Blumsohn, G.** (see also D. Hodes)

**Blumsohn, G., and Laufer, M.**

[2009] *Unstable loss development factors.* In: *CAS E-Forum Spring 2009*.

**Boles, T., and Staudt, A.**

[2010] *On the accuracy of loss reserving methodology.* In: *CAS E-Forum Fall 2010*.

**Boogaert, P., and Haezendonck, J.**

[1989] *Delay in claim settlement.* *Insurance Math. Econom.* **8**, 321–330.

**Boor, J.**

[2006] *Estimating tail development factors – What to do when the triangle runs out.* In: *CAS Forum Winter 2006*, pp. 345–390.

[2014] *Interpolation along a curve.* *Variance* **8**, 9–22.

[2016] *Escaping hindsight – Case reserve development using the reserve runoff ratio.* In: *CAS E-Forum Fall 2016*.

[2017] *Unbiased development for individual claims – Taming the wild burning cost.* In: *CAS E-Forum Spring 2017*.

**Bornhuetter, R. L., and Ferguson, R. E.**

[1972] *The actuary and IBNR.* *Proc. CAS* **59**, 181–195.

**Borre, E. van den** (see M. J. Goovaerts)

**Boucher, J. P.** (see also A. Abdallah)

**Boucher, J. P., and Davidov, D.**

[2011] *On the importance of dispersion modeling for claims reserving – An application with the Tweedie distribution.* *Variance* **5**, 158–172.

**Boucher, J. P., Denuit, M., and Guillén, M.**

[2008] *Models of insurance claim counts with time dependence based on generalization of Poisson and negative binomial distributions.* *Variance* **2**, 135–162.

**Boulter, A., and Grubbs, D.**

[2000] *Late claims reserves in reinsurance.* *Swiss Re, Zürich*.

**Bouska, A. S.**

[2000] *The future of mass torts.* In: *CAS Forum Fall 2000*, pp. 35–45.

**Bouska, A. S., and Lebens, J. R.**

[2006] *Looking back – A loss reserve control cycle.* *Emphasis* 2006/1.

**Bouska, A. S., and McIntyre, T. S.**

[1994] *Measurement of U. S. Pollution Liabilities.* In: *CAS Forum Summer 1994*, pp. 73–160.

**Boutchee, J. P.** (see K. A. Cleary)

**Bowron, L.** (see J. Kerper)

**Brandt, E. A.** (see R. J. Walling)

**Braun, C.** (see also T. Mack)

[2004] *The prediction error of the chain-ladder method applied to correlated run-off triangles.* *ASTIN Bull.* **34**, 399–423.

**Brechmann, E. C.** (see N. Krämer)

**Brehm, P. J.**

[2002] *Correlation and the aggregation of unpaid loss distributions.* In: *CAS Forum Fall 2002*, pp. 1–23.

[2006] *A least squares method for predicting Bornhuetter–Ferguson loss ratios.* In: *CAS Forum Fall 2006*, pp. 441–450.

**Brodsky, J. B.** (see D. B. Speights)

**Brosius, E.**

[1993] *Loss development using credibility.*

**Brown, B. Z.** (see also R. R. Bhagavaluta)

**Brown, B. Z., Godown, J., and Kappeler, G. E.**

[1996] *Disclosure requirements for mass torts.* In: *CAS Forum Summer 1996*, pp. 321–.

[1997] *Disclosure requirements for mass torts.* *Insurance Math. Econom.* **19**, 167–167.

**Brown, B. Z., and Schmitz, M. C.**

[1999] *Reserving for loss sensitive premium items.* In: *CAS Forum Fall 1999*, pp. 1–20.

**Brown, R. L.**

[1993] *Introduction to ratemaking and loss reserving for property and casualty insurance.* ACTEX Publications.

[1994] *Variability of loss reserves.* In: *CAS Forum Spring 1994*, pp. 279–298.

**Brown, R. L., and Gottlieb, L. R.**

[2007] *Introduction to Ratemaking and Loss Reserving for Property and Casualty Insurance* (Third Edition). Winsted CT, Actex Publications.

**Bryan, C. A.**

[2003] *Discussion of Khury (2002).* *Proc. CAS* **90**, 308–316.

**Buchanan, R. A.** (see also D. G. Hart, G. C. Taylor)

[1997] *Utility estimation.* In: *Proc. 28th Int. ASTIN Colloquium Cairns 1997*, pp. 413–426.

[1998] *The philosophy of reserving.* In: *CAS Forum Fall 1998*, pp. 103–130.

**Buchwalder, M., Bühlmann, H., Merz, M., and Wüthrich, M. V.**

[2006] *The mean square error of prediction in the chain–ladder reserving method (Mack and Murphy revisited).* *ASTIN Bull.* **36**, 521–542.

[2006] *The mean square error of prediction in the chain–ladder reserving method – Final remark.* *ASTIN Bull.* **36**, 553.

[2006] *Estimation of unallocated loss adjustment expenses.* *Bull. SAV*, 43–53.

**Bühlmann, H.** (see also M. Buchwalder, M. V. Wüthrich)

[1983] *Estimation of IBNR reserves by the methods of chain–ladder, Cape–Cod, and complementary loss ratio.* International Summer School 1983. Unpublished.

**Bühlmann, H., De Felice, M., Gisler, A., Moriconi, F., and Wüthrich, M. V.**

[2009] *Recursive credibility formula for chain ladder factors and the claims development result.* *ASTIN Bull.* **33**, 275–306.

**Bühlmann, H., and Moriconi, F.**

[2015] *Credibility claims reserving with stochastic diagonal effects.* *ASTIN Bull.* **45**, 309–353.

**Bühlmann, H., Schnieper, R., and Straub, E.**

[1980] *Claims reserves in casualty insurance based on a probabilistic model.* *Mitt. SVVM* **80**, 21–45.

**Buono, G., Ferrara, G., and Quario, G.**

[1976] *Statistical approach to the outstanding claims reserve in motor insurance.* In: *Trans. Int. Congress of Actuaries*, vol. , pp. 455–465.

**Burren, D.**

[2015] *The market value margin within the distribution-free chain ladder model – A way to account for calendar year effects and aggregating lines of business.* In: *CAS E-Forum Fall 2015*.

**Bushel, A.** (see G. G. Venter)

**Busse, M., Müller, U., and Dacorogna, M.**

[2010] *Robust estimation of reserve risk.* *ASTIN Bull.* **40**, 453–489.

**Butcher, J. F., Collins, D. J., and Westphal, S.**

[2006] *Stochastic reserving measures uncertainty.* *Emphasis* 1/2006.

**Butsic, R. P.**

[1991] *The effect of inflation on losses and premiums for property-liability insurers.* *CAS Discussion Paper Program*, pp. 58–109.

[1988] *Determining a proper interest rate for loss reserve discounting.* *CAS Discussion Paper Program*, pp. 147–188.

**Cadorine, A. R.**

[1997] *Guidance regarding management data and information.* In: *CAS Forum Winter 1997*, pp. 133–.

**Cantin, C., and Trahan, P.**

[1999] *Study note on actuarial evaluation of premium liabilities.* In: *CAS Forum Fall 1999*, pp. 21–83.

**Carlson, J.** (see M. Winslow)

**CAS Committee on Reserves**

[2001] *Survey of loss reserving actuaries report.* In: *CAS Forum Fall 2001*, pp. 393–428.

**CAS Tail Factor Working Party**

[2013] *The estimation of loss development tail factors – A summary report.* In: *CAS E-Forum Fall 2013*.

**CAS Working Party on Quantifying Variability in Reserves Estimates**

[2005] *The analysis and estimation of loss and ALAE variability – A summary report.* In: *CAS Forum Fall 2005*, pp. 29–146.

**Cator, E. A.** (see B. Posthuma)

**Centeno, M. de Lourdes** (see P. J. .R. Pinheiro)

**Chan, J. S. K.** (see A. X. D. Dong)

**Chan, J. S. K., Choy, S. T. B., and Makov, U. E.**

[2007] *Model selection for loss reserves: the growing triangle technique.* Preprint.

[2008] *Robust Bayesian analysis of loss reserves data using the generalized  $t$ -distribution.* *ASTIN Bull.* **3**, 207–230.

**Chatterjee, S.** (see H. I. Weisberg)

**Chen, H.** (see W. K. Leong)

**Cheng, J. S.**



- [1999] *Automobile warranty unearned premiums and deferred policy acquisition expenses.* In: *CAS Forum Fall 1999*, pp. 85–115.
- Chin, R.** (see L. Llaguno)
- Choo, W, and De Jong, P.**
- [2009] *Loss reserving using loss aversion functions.*
- Choy, B. S. T.** (see J. S. K. Chan)
- Christie, J.** (see B. Moore)
- Christofides, S.**
- [1989] *Regression models based on log-incremental payments.* In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.
- Chudova, D. L.** (see D. B. Speights)
- Clemente, A. G. P.** (see G. A. Spedicato)
- Clark, D. R.**
- [1994] *A simple tool for pricing loss sensitive features of reinsurance treaties.* In: *CAS Forum Winter 1994*, pp. 367–.
- [1996] *Basics of Reinsurance Pricing.* CAS Study Note.
- [2003] *LDF curve fitting and stochastic reserving: A maximum likelihood approach.* In: *CAS Forum Fall 2003*, pp. 41–91.
- [2006] *Variance and covariance in reserves due to inflation.* In: *CAS Forum Fall 2006*, pp. 61–95.
- [2008] *Reserving with incomplete exposure information.* In: *CAS E-Forum Fall 2008*.
- [2016] *Introduction to Bayesian loss development.* In: *CAS E-Forum Summer 2016*.
- Clark, D. R., and Rangelova, D.**
- [2015] *Accident year / development year interactions.* In: *CAS E-Forum Fall 2015*.
- Clark, P.** (see C. J. W. Czapiewski)
- Clarke, H.**
- [1988] *Recent developments in reserving for losses in the London reinsurance market.* Proc. CAS **75**, 1–48.
- Clarke, H. E., and Eagles, L. M.**
- [1980] *Mathematical density functions applied to a liability insurance portfolio.* In: *Trans. 21st Int. Congress of Actuaries*, vol. , pp. 59–69.
- Clarke, T. G.**
- [1974] *An actuary looks at claims provisions in general insurance.* In: *Claims Provisions for Non-Life Insurance Business*, pp. 84–123.
- Clarke, T. G., and Harland, N.**
- [1974] *A practical statistical method of estimating claims liability and claims cash flow.* ASTIN Bull. **8**, 26–37.
- Cleary, K. A., and Boutchee, J. P.**
- [2002] *Reserving for catastrophes.* In: *CAS Forum Fall 2002*, pp. 25–76.
- Collins, D. J.** (see J. F. Butcher)
- Collins, W. J.**
- [2013] *Justifications for and implications of regulators suggesting particular reserving techniques.* In: *CAS E-Forum Fall 2013*.

**Colquitt, L. L., Hoyt, R. E., and McCullough, K. A.**

- [2002] *Asbestos and environmental reserves increases and shareholder wealth.* In: *CAS Forum Fall 2002*, pp. 77–102.

**Committee on Loss Reserves**

- [1978] *Statement of principles regarding property and casualty loss and loss adjustment expense liabilities.* Proc. CAS **65**, 74–89.
- [1979] *Statement of principles regarding property and casualty loss and loss adjustment expense liabilities.* ASTIN Bull. **10**, 305–317.

**Commodore, A. D.**

- [1994] *An alternative to the parallelogram method.* In: *CAS Forum Winter 1994*, pp. 1–.

**Conger, R. F., and Grove, R. L.**

- [2001] *The value of interacting with the claims department.* In: *CAS Forum Fall 2001*, pp. 1–42.

**Conger, R. F., and Nolibos, A.**

- [2003] *Estimating ULAE liabilities: Rediscovering and expanding Kittel's approach.* In: *CAS Forum Fall 2003*, pp. 93–139.

**Cook, C. F.**

- [1970] *Trend and loss development factors.* Proc. CAS **57**, 1–26.

**Cooper, W. P.**

- [1973] *Discussion of Bornhuetter and Ferguson (1972).* Proc. CAS **60**, 161–164.

**Corro, D., and Engl, G. J.**

- [2006] *The 2004 NCCI excess loss factors.* In: *CAS Forum Fall 2006*, pp. 513–571.

**Corro, D. R.**

- [2000] *Modelling loss development with micro data.* In: *CAS Forum Fall 2000*, pp. 281–301.

**Corzo, M. A. R.** (see De Alba)**Cossette, H.** (see A. Abdallah)**Coté, M. P., Genest, C., and Abdallah, A.**

- [2016] *Rank-based methods for modeling dependence between loss triangles.* European Actuarial J. **6**, 377–408.

**Couper, A.** (see A. Czernuszewicz)**Courchene, J. A.** (see M. R. Shapland)**Craig, A.** (see D. Mango)**Craighead, D. H.**

- [1979] *Some aspects of the London reinsurance market in world wide short term business.* J. Inst. Actuar. **106**, 227–287.
- [1980] *Loss ratios on liability groups.* GIRO **29**, 11–12.
- [1986] *Techniques of reserving: The London market.* J. Inst. Actuar. **113**, 411–457.
- [1994] *Reserving for catastrophe reinsurance.* J. Inst. Actuar. **121**, 135–160.

**Cresswell, C.** (see C. J. W. Czapiewski)**Cross, S. L., and Doucette, J. P.**

- [1994] *Measurement of asbestos bodily injury liabilities.* In: *CAS Forum Summer 1994*, pp. 161–.
- [1997] *Measurement of asbestos bodily injury liabilities.* Proc. CAS **84**, 187–300.

**Cummins, J. D., and Derrig, R. A.**

- [1993] *Fuzzy trends in property-liability insurance claim costs*. J. Risk Insurance **60**, 429–465.
- Cumpston, J. R.**  
[1977] *Discussion of Taylor and Matthews (1977)*. Trans. Inst. Actuar. Australia, 279–282.
- Curley, K.**  
[2013] *Testing the assumptions of assumptions testing*. In: *CAS E-Forum Fall 2013*.
- Czado, C.** (see N. Krämer)
- Czapiewski, C. J. W., Archer-Lock, P., Cresswell, C., Hindley, D., and Shepley, S.**  
[1993] *Reserving for outwards reinsurance*. General Insurance Study Group **2**, 439–485.
- Czemuszewics, A., Couper, A., and Orr, J.**  
[1998] *Reserving and pricing for large claims*. In: *General Insurance Convention & Astin Colloquium*, vol. 1, pp. 119–164. London: Institute of Actuaries.
- Dacorogna, M.** (see M. Busse)
- Dahl, P.**  
[] *Introduction to reserving*.
- Dahms, R.**  
[2005] *Extended complementary loss ratio method*. Preprint.  
[2008] *A loss reserving method for incomplete claim data*. Bull. SAV, 127–148.  
[2012] *Linear stochastic reserving methods*. ASTIN Bull. **42**, 1–34.
- Daley, T. V.**  
[2013] *Class ratemaking for workers compensation – New developments in loss development*. Variance **6**, 196–244.
- Dal Moro, E.**  
[2013] *Kurtosis and skewness estimation for non-life reserve risk distribution*. In: *CAS E-Forum Summer 2013*.
- Dal Moro, E., and Krvavich, J.**  
[2017] *Probability of sufficiency of Solvency II reserve risk margins – Practical approximations*. ASTIN Bull. **47**, 737–785.
- Dal Moro, E., and Lo, J.**  
[2014] *An industry question: The ultimate and one-year reserving uncertainty for different non-life reserving methodologies*. ASTIN Bull. **44**, 495–499.
- Dannenburg, D.**  
[1995] *Crossed classification credibility models*. In: *Trans. 25th Int. Congress of Actuaries*, vol. 4, pp. 1–36.  
[1996] *An autoregressive credibility IBNR model*. Blätter DGVM **22**, 235–248.
- Dannenburg, D., Kaas, R., and Goovaerts, M. J.**  
[1996] *Practical Actuarial Credibility Models*. Leuven: Ceuterick.
- D’Arcy, S. P.**  
[1996] *Special Issues – Data Sources*. In: *Foundations of Casualty Actuarial Science*. Third Edition. pp. 567–573.
- D’Arcy, S. P., and Au, A.**  
[] *A two-factor approach to loss reserve variability*.
- D’Arcy, S. P., Au, A., and Zhang, L.**

[2008] *Property–liability insurance loss reserve ranges based on economic value*. In: *CAS E–Forum Fall 2008*.

[2009] *Property–liability insurance loss reserve ranges based on economic value*. *Variance* **3**, 42–61.

**Daykin, C. D., and Hewitson, T. W.**

[1985] *How useful is the chain–ladder method for testing reserve adequacy?* *GIRO* **39**, 7.

**De Alba, E.**

[2002] *Bayesian estimation of outstanding claims reserves*. *North American Actuarial J.* **6**, 1–20.

[2006] *Claims reserving when there are negative values in the development triangle: Bayesian analysis using the three–parameter log–normal distribution*. *North American Actuarial J.* **10**, 45–59.

**De Alba, E., and Corzo, M. A. R.**

[2006] *Bayesian claims reserving when there are negative values in the runoff triangle*. *Actuarial Research Clearing House* 1/2006.

**De Alba, E., and Nieto–Barajas, L.**

[2008] *Claims reserving – A correlated Bayesian model*. *Insurance Math. Econom.* **43**, 368–376.

**De Alba, E., Juarez, M. A., and Moreno, T.**

[1998] *Bayesian estimation of IBNR reserves*. In: *Trans. 26th Int. Congress of Actuaries*, vol. 4, pp. 255–273.

**De Andrés Sánchez, J.** (see A. T. Gómez)

**De Felice, M.** (see H. Bühlmann)

**De Jong, P.** (see also W. Choo)

[2006] *Forecasting runoff triangles*. *North American Actuarial J.* **10**, 28–38.

[2011] *Modeling dependence between loss triangles*. Preprint.

**De Jong, P., and Zehnwirth, B.**

[1980] *A random coefficients approach to claims reserving*. Research Paper No. 219 School of Economic and Financial Studies, Macquarie University, North Ryde.

[1983] *Credibility theory and the Kalman filter*. *Insurance Math. Econom.* **2**, 281–286.

[1983] *Claims reserving, state space models and the Kalman filter*. *J. Inst. Actuar.* **110**, 157–182.

**De Lourdes Centeno, M.**

[1995] *The effect of the retention limit on the risk reserve*. *ASTIN Bull.* **25**, 67–74.

**De Schepper, A.** (see M. J. Goovaerts)

**De Vylder, F.**

[1978] *Estimation of IBNR claims by least squares*. In: *IBNR – Proc. First Meeting Contact–group Actuarial Sciences*, pp. 22–28.

[1978] *Estimation of IBNR claims by least squares*. *Mitt. SVVM* **78**, 249–254.

[1982] *Estimation of IBNR claims by credibility theory*. *Insurance Math. Econom.* **1**, 35–40.

[1996] *Advanced Risk Theory*. Editions de l’Université de Bruxelles.

**De Vylder, F., and Goovaerts, M. J.**

[1999] *Solvency margins and equalization reserves*. *Insurance Math. Econom.* **24**, 103–115.

**De Wit, G. W.**

[1981] *Loss Reserving Methods*. Rotterdam: Nationale Nederlanden.

**De Wit, G. W., and Kastelijjn, W. M.**

- [1978] *IBNR*. In: *IBNR – Proc. First Meeting Contactgroup Actuarial Sciences*, pp. 65–77.
- Debruyne, M.** (see T. Verdonck)
- Deemer, P. B.**
- [2006] *“Adjusting & other” reserves according to the “loss-activity” method*. In: *CAS Forum Fall 2006*, pp. 97–109.
- Dellaportas, P.** (see I. Ntzoufras)
- Denuit, M.** (see J. P. Boucher, M. Pigeon)
- Derrig, R. A.** (see J. D. Cummins)
- Dew, E. D., and Hedges, B. W.**
- [1997] *Reserving for excess layers: A guide to practical reserving applications*. In: *CAS Forum Summer 1997*, vol. 1, pp. 39–95.
- Dhaene, J.** (see M. J. Goovaerts, T. Hoedemakers)
- Diamantoukos, C.**
- [2000] *Estimating U. S. environmental pollution liabilities by simulation*. *Proc. CAS* **87**, 79–161.
- Dickson, D., Tedesco, L., and Zehnwirth, B.**
- [1998] *Predictive aggregate claims distributions*. *J. Risk Insurance* **65**, 689–709.
- Diers, D.** (see C. also Kraus)
- Diers, D., and Linde, M.**
- [2013] *The multi-year non-life insurance risk in the additive loss reserving model*. *Insurance Math. Econom.* **52**, 590–598.
- Diss, G. F.** (see R. E. Sherman)
- Dittmer, J. M.**
- [2006] *Nearest neighbour methods for reserving with respect to individual losses*. *Blätter DGVFM* **27**, 647–664.
- Djehiche, B., and Löfdahl, B.**
- [2014] *Risk aggregation and stochastic claims reserving in disability insurance*. *Insurance Math. Econom.* **59**, 100–108.
- Dong, A. X.** (see G. W. Peters)
- Dong, A. X. D., and Chan, J. S.**
- [2013] *Bayesian analysis of loss reserving using dynamic models with generalized beta distribution*. *Insurance Math. Econom.* **53**, 355–365.
- Doray, L. G.**
- [1994] *IBNR reserve under a loglinear location scale regression model*. In: *CAS Forum Spring 1994*, pp. 607–652.
- [1996] *UMVUE of the IBNR reserve in a lognormal linear regression model*. *Insurance Math. Econom.* **18**, 43–57.
- [1997] *A semi-parametric predictor of the IBNR reserve*. *ASTIN Bull.* **27**, 113–116.
- [1997] *Constrained forecasting of the number of IBNR claims*. *J. Actuarial Practice* **4**, 287–305.
- [1998] *Outstanding claims reserve with misspecified error distribution*. In: *Trans. 26th Int. Congress of Actuaries*, vol. 4, pp. 275–290.
- [2002] *Number of IBNR claims and multivariate compound Poisson distribution*.

**Doucette, J. P.** (see S. L. Cross)

**Douglas, O.** (see A. Halpert)

**Drab, S.** (see B. Moore)

**Drieskens, D., Henry, M., Walhin, J. F., and Wielandts, J.**

[2012] *Stochastic projection for large individual losses*. *Scand. Actuar. J.*, 1–39.

**Dubey, A.**

[1990] *Credibility–Modell und Schadenrückstellungen: Einige Bemerkungen zu einer schwierigen (Zwangs–)Ehe*. *Mitt. SVVM* **90**, 39–51.

**Dubois de Montreynaud, B., and Strube, D.**

[1977] *Evaluation de provisions pour sinistres à payer en période de stagflation*. *ASTIN Bull.* **9**, 105–110.

**Dubossarsky, E.** (see G. Barnett)

**Duvall, R. M.**

[1992] *Testing for shifts in reserve adequacy*. *Proc. CAS* **79**, 1–20.

**Eagles, L. M.** (see S. Benjamin, H. E. Clarke)

**Easton, R.**

[2007] *Incorporating cancellations into pricing and reserving extended warranties*. In: *CAS Forum Spring 2007*, pp. 73–87.

**Edie, G. M.**

[1999] *Evaluating the unearned premium reserve for automobile extended service contracts*. In: *CAS Forum Fall 1999*, pp. 117–145.

**El–Bassiouni, M. Y.**

[1991] *A mixed model for loss ratio analysis*. *ASTIN Bull.* **21**, 231–238.

**Ely, J.**

[2013] *Runoff collateral requirements*. In: *CAS E–Forum Fall 2013*.

**Engl, G. J.** (see D. Corro)

**England, P. D.** (see also R. J. Verrall)

[2002] *Addendum to 'Analytic and bootstrap estimates of prediction errors in claims reserving'*. *Insurance Math. Econom.* **31**, 461–466.

**England, P. D., and Verrall, R. J.**

[1998] *Standard errors of prediction in claims reserving: A comparison of methods*. In: *General Insurance Convention & Astin Colloquium*, vol. 1, pp. 459–478. London: Institute of Actuaries.

[1999] *Analytic and bootstrap estimates of prediction errors in claims reserving*. *Insurance Math. Econom.* **25**, 281–293.

[2000] *Comments on: A comparison of stochastic models that reproduce chain–ladder reserve estimates*. *Insurance Math. Econom.* **26**, 109–111.

[2001] *A flexible framework for stochastic claims reserving*. *Proc. CAS* **88**, 1–38.

[2002] *Stochastic claims reserving in general insurance*. London: Institute of Actuaries.

[2002] *Stochastic claims reserving in general insurance*. *British Actuar. J.* **8**, 443–544.

[2007] *Predictive distributions of outstanding liabilities in general insurance*. *Ann. Actuar. Science*, **1**, 212–270.

[] *Joint modelling with generalized additive models for claims reserving*.

**Evans, J. P.**

[2015] *A continuous version of Sherman's inverse power curve model with simple cumulative development factor formulas.* Variance **9**, 187–195.

[2015] *Tail factor convergence in Sherman's inverse power curve loss development factor model.* Variance **9**, 227–233.

**Fannin, B. A.**

[2008] *A survival model approach to non-life run-off triangle estimation.* In: *CAS E-Forum Fall 2008.*

**Feay, H. L.**

[1969] *Discussion of Benedikt (1969).* ASTIN Bull. **5**, 274–279.

**Feldblum, S.** (see also D. Hodes)

[1993] *Discussion of Ludwig (1991).* Proc. CAS **80**, 380–395.

[1998] *Discussion of Teng and Perkins (1996).* Proc. CAS **85**, 274–315.

[2002] *The Stanard-Bühlmann reserving procedure – A practitioner's guide.* In: *CAS Forum Fall 2002*, pp. 777–822.

[2003] *The Stanard-Bühlmann reserving procedure – A practitioner's guide.* Proc. CAS **90**, 155–195.

**Fellenberg, K.** (see D. Lieder)

**Fendley, V. A.** (see B. A. Jones)

**Ferdandez, C.** (see R. Atherino)

**Ferguson, R. E.** (see R. L. Bornhuetter)

**Ferrara, G., and Quario, G.** (see also G. Buono)

[1977] *Distribution of the number of claims in motor insurance according to the lag of settlement.* ASTIN Bull. **9**, 119–124.

**Finger, R. J.**

[1976] *Modelling loss reserve developments.* Proc. CAS **63**, 90–106.

[1987] *Average payment development.*

[1987] *Case reserve development.*

**Fisher, W. H., and Lange, J. T.**

[1973] *Loss reserve testing: A report year approach.* Proc. CAS **60**, 189–207.

[1974] *Loss reserve testing: A report year approach. Author's response.* Proc. CAS **61**, 84–85.

**Fisher, W. H., and Lester, E. P.**

[1975] *Loss reserve testing in a changing environment.* Proc. CAS **62**, 154–171.

**Fleming, K. G.**

[2013] *Seeing the forest with the stems-and-leaves.* In: *CAS E-Forum Fall 2013.*

**Fleming, K. G., and Mayer, J. H.**

[1988] *Adjusting incurred losses for simultaneous shifts in payment patterns and case reserve adequacy levels..* CAS Discussion Paper Program, pp. 189–214.

**Forbes, S. W.**

[1972] *Loss reserve valuations and financial results in non-life insurance.* J. Risk Insurance , 369–381.

**Forray, S. J.**

[2010] *Reserving for extended reporting endorsement coverage, including the death, disability and retirement policy provision.* In: *CAS E-Forum Fall 2010.*

**Forray, S. J., and Ballweg, Z. A.**

- [2013] *Peaks and troughs – Reserving through the market cycle*. In: *CAS E-Forum Fall 2013*.
- Forster, W.** (see G. Lyons)
- Foster, G. T.**
- [1971] *The determination of IBNR reserves and the effect of IBNR on the underwriting of excess of loss business*. In: *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition*, pp. 7–30. Amsterdam: Nederlandse Reassurantie Groep NV.
- Fowler, T. W.**
- [1971] *Liability IBNR reserves*. In: *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition*, pp. 30–55. Amsterdam: Nederlandse Reassurantie Groep NV.
- Frees, E. W.** (see P. Shi)
- Frerman, K. S.** (see B. A. Jones)
- Friedland, J.**
- [2010] *Estimating Unpaid Claims Using Basic Techniques*. In: *CAS Forum Fall 2004*, pp. 1–35.
- Fuchs, S.**
- [2014] *Consistent loss prediction of a portfolio and its subportfolios*. *Scand. Actuar. J.*, 561–581.
- Genest, C.** (see also M. P. Coté)
- Germani, W., and Gwynn, H.**
- [2004] *Reconciliation and the actuarial opinion*. Casualty Actuarial Society.
- Ghezzi, T. L.**
- [2001] *Loss reserving without loss development patterns – Beyond Berquist–Sherman*. In: *CAS Forum Fall 2001*, pp. 43–104.
- [2005] *Value-added reserving*. *Emphasis* 3/2005.
- Ghezzi, T. L., and Powell, D. S.**
- [2004] *Atypical circumstances in statements of actuarial opinion on P & C loss reserves: Professional considerations and sample wordings*. In: *CAS Forum Fall 2004*, pp. 37–51.
- Gibson, L.**
- [2000] *Reserving – Best estimates and ranges*. In: *Proceedings of the General Insurance Convention*, vol. 2, pp. 185–187. Institute of Actuaries.
- Gigante, P., Picech, L., and Sigalotti, L.**
- [2013] *Prediction error for credible claims reserves – an h-likelihood approach*. *European Actuarial J.* **3**, 453–470.
- [2013] *Claims reserving in the hierarchical generalized linear model framework*. *Insurance Math. Econom.* **52**, 381–390.
- Gigante, P., and Sigalotti, L.**
- [2005] *Model risk in claims reserving with generalized linear models*. *Giornale Istituto Italiano Attuari* **68**, 55–87.
- Gillet, A., and Serra, B.**
- [2003] *Effets de la dépendance entre différentes branches sur le calcul des provisions*. Paper presented at the 2002 ASTIN Colloquium, Cancun.
- Gisler, A.** (see also A. Saluz, H. Bühlmann)
- [2006] *The estimation error in the chain-ladder reserving method – A Bayesian approach*. *ASTIN Bull.* **36**, 554–565.
- Gisler, A., and Wüthrich, M.**



- [2008] *Credibility for the chain-ladder reserving method*. ASTIN Bull. **38**, 565–597.
- Gleason, S. H.**  
[1997] *Independent claim report lags and bias in forecasts using age-to-age factor methodology*. In: *CAS Forum Summer 1997*, vol. 2, pp. 187–201.
- Gluck, S. M.**  
[1997] *Balancing development and trend in loss reserve analysis*. Proc. CAS **84**, 482–532.
- Godown, J.** (see B. Z. Brown)
- Gogol, D. F.** (see also E. Pinto)  
[1983] *Using expected loss ratios in reserving*. Insurance Math. Econom. **12**, 297–299.  
[1987] *Projecting development of losses during an accident year*. ASTIN Bull. **17**, 179–182.  
[1995] *Discussion of Murphy (1994)*. Proc. CAS **82**, 72–77.  
[1995] *Using expected loss ratios in reserving*. In: *CAS Forum Fall 1995*, pp. 241–243.
- Goldberg, L. R., and LaBella, J.**  
[1997] *An integrated pricing and reserving process for reinsurers*. In: *CAS Forum Spring 1997*, pp. 237–288.
- Gómez, A. T., and J. de Andrés Sánchez**  
[2003] *Application of fuzzy regression in actuarial analysis*. J. Risk Insurance **70**, 665–699.
- Gonwa, C.** (see A. Halpert)
- Goodreau, A. J.**  
[1999] *Accrued retrospectively rated premiums by individual policyholder accounts*. In: *CAS Forum Fall 1999*, pp. 147–175.
- Goovaerts, M. J.** (see also D. Dannenburg, F. De Vylder, T. Hoedemakers, J. Spreeuw)
- Goovaerts, M. J., and De Schepper, A.**  
[1997] *IBNR reserves under stochastic interest rates*. Insurance Math. Econom. **21**, 225–244.
- Goovaerts, M. J., Dhaene, J., Borre, E. van den, and Redant, H.**  
[2001] *Some remarks on IBNR evaluation techniques*. Belgian Actuar. Bull. **1**, 58–60.
- Goovaerts, M. J., Kaas, R., Van Heerwaarden, A. E., and Bauwelinckx, T.**  
[1990] *Effective Actuarial Methods*. Amsterdam – New York: North-Holland.
- Goovaerts, M. J., and Redant, H.**  
[1999] *On the distribution of IBNR reserves*. Insurance Math. Econom. **25**, 1–9.
- Gottlieb, L. R.** (see R. L. Brown)
- Gould, A. J.**  
[2000] *Estimating satellite insurance liabilities*. In: *CAS Forum Fall 2000*, pp. 47–84.
- Grace, M. F.** (see A. Milidonis)
- Gradwell, J. W.** (see G. G. Venter)
- Green, M. D., Larrick, M., Wettstein, C. D., and Bennington, T. L.**  
[2001] *Reserving for construction defects*. In: *CAS Forum Fall 2001*, pp. 105–152.
- Greenfield, A.** (see G. C. Taylor)
- Greup, E. K.** (see J. Van Eeghen)
- Grigoriadou, V.** (see G. Pitselis)
- Grönke, D., and Heep–Altiner, M.**

- [2004] *Haftpflichtversicherung*. In: *Handbuch zur Schadenreservierung*, pp. 99–109. Karlsruhe: Verlag Versicherungswirtschaft.

**Grossack, V.**

- [2004] *Meaningful ranges for reserves*. Actuar. Rev. **31**, No. 4, 25.

**Grove, R. L.** (see R. F. Conger)

**Grubbs, D.** (see A. Boulter)

**Guaschi, F. E.**

- [1974] *Delay problems in reinsurance*. In: *Claims Provisions for Non-Life Insurance Business*, pp. 124–138.

**Guiahi, F.**

- [1986] *A probabilistic model for IBNR claims*. Proc. CAS **73**, 93–107.  
 [2007] *Pricing multiple property cover based on a bivariate lognormal distribution*. Variance **1**, 273–291.

**Guillén, M.** (see J. P. Boucher)

**Guo, L.**

- [2001] *A dynamic model for the valuation of fair value insurance liabilities*. In: *CAS Forum Fall 2001*, pp. 153–191.

**Guszcza, J. C.**

- [2006] *Loss reserving using claim-level data*. In: *CAS Forum Fall 2006*, pp. 111–140.  
 [2008] *Hierarchical growth curve models for loss reserving*. In: *CAS E-Forum Fall 2008*.

**Gütschow, T., Hess, K. Th., and Schmidt, K. D.**

- [2017] *Separation of small and large claims on the basis of collective models*. Scand. Actuar. J., 1–16. (online).

**Gwilliam, C. L.** (see E. T. Bardis, L. Llaguno)

**Gwynn, H.** (see W. Germani)

**Haarstrup, S.**

- [1997] *Some fully Bayesian micro models for claims reserving*. PhD Thesis, University of Copenhagen.

**Haarstrup, S., and Arjas, E.**

- [1996] *Claims reserving in continuous time: A nonparametric Bayesian approach*. ASTIN Bull. **26**, 139–164.

**Haberman, S., and Renshaw, A. E.**

- [1996] *Generalized linear models and actuarial science*. The Statistician **45**, 407–436.

**Hachemeister, C. A.**

- [1976] *Breaking down the loss reserving process*. CAS Symposium on Loss Reserves in Chicago.  
 [1978] *A structural model for the analysis of loss reserves*. Bull. Ass. Roy. Act. Belg. **73**, 17–27.  
 [1978] *A stochastic model for loss reserving*. In: *IBNR – Proc. First Meeting Contactgroup Actuarial Sciences*, pp. 6–21.  
 [1980] *A stochastic model for loss reserving*. In: *Trans. 21st Int. Congress of Actuaries*, vol. 1, pp. 185–194.

**Hachemeister, C. A., and Stanard, J. N.**

- [1975] *IBNR claims count estimation with static lag functions*. 12th ASTIN Colloquium, IAA, Portimao, Portugal.

**Hadidi, N.**

- [1985] *A note on De Vylder's method of estimation of IBNR claims.* Insurance Math. Econom. **4**, 263–266.

**Haezendonck, J.** (see P. Boogaert)**Hagerstrand, J.** (see L. Llaguno)**Halliwell, L. J.**

- [1996] *Statistical and financial aspects of self-insurance funding.* CAS Discussion Paper Program, pp. 1–46.
- [1996] *Loss prediction by generalized least squares.* Proc. CAS **83**, 436–489.
- [1997] *Conjoint prediction of paid and incurred losses.* In: *CAS Forum Summer 1997*, vol. 1, pp. 241–379.
- [1999] *Author response.* Proc. CAS **86**, 764–780.
- [2007] *Chain-ladder bias: Its reason and meaning.* Variance **1**, 214–247.
- [2009] *Modelling paid and incurred losses together.* In: *CAS E-Forum Spring 2009*.

**Halmstad, D. G.**

- [1974] *Most efficient fluctuation reserves.* ASTIN Bull. **8**, 66–76.

**Halpert, A., and Douglas, O.**

- [1988] *Reserves, surplus and uncertainty.* CAS Discussion Paper Program, pp. 215–.

**Halpert, A., Weinstein, S., and Gonwa, C.**

- [2001] *Evaluating reserves in a changing claims environment.* In: *CAS Forum Fall 2001*, pp. 193–237.

**Hamer, M.**

- [1999] *Discussion of Halliwell (1996).* Proc. CAS **86**, 748–763.

**Haner, W. J.**

- [1994] *Estimating accident year losses from self-insured workers' compensation pay-as-you-go data.* In: *CAS Forum Winter 1994*, pp. 333–.

**Happ, S., Maier, R., and Merz, M.**

- [2014] *Multivariate Bühlmann–Straub credibility model applied to claims reserving for correlated run-off triangles.* Variance **8**, 23–42.

**Happ, S., Merz, M., and Wüthrich, M. V.**

- [2012] *Claims development result in the paid-incurred chain reserving method.* Insurance Math. Econom. **51**, 66–72.
- [2015] *Best-estimate claims reserves in incomplete markets.* European Actuarial J. **5**, 55–77.

**Happ, S., and Wüthrich, M. V.**

- [2013] *Paid-incurred chain reserving method with dependence modelling.* ASTIN Bull. **43**, 1–20.

**Harborne, E. S.**

- [1974] *Setting of reserves in an inflationary world.* In: *Claims Provisions for Non-Life Insurance Business*, pp. 139–155.

**Harding, J., Hindley, D., Lyons, G., and Stock, R.**

- [1988] *The reserving of non-standard classes of insurance.* In: *General Insurance Convention & Astin Colloquium*, vol. 1, pp. 165–237. London: Institute of Actuaries.

**Harding, V.**

- [1971] *Treatment of incurred but not reported claims.* In: *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition*, pp. 55–65. Amsterdam: Nederlandse Reassurantie Groep NV.

**Harland, N.** (see T. G. Clarke)

**Harnek, R. F.**

[1966] *Formula loss reserves*. Insurance Accounting and Statistical Ass. Proc.

**Hart, D. G.**

[1996] *Discussion of 'Discussion of methods of claim reserving in non-life insurance' by D. H. Reid*. Insurance Math. Econom. **5**, 57–58.

**Hart, D. G., Buchanan, R. A., and Howe, B. A.**

[1996] *The Actuarial Practice of General Insurance*. Sydney: Institute of Actuaries of Australia.

**Hartl, T.**

[2010] *Bootstrapping generalized linear models for development triangles using deviance residuals*. In: *CAS E-Forum Fall 2010*.

[2010] *Fitting a GLM in incomplete development triangles*. In: *CAS E-Forum Fall 2010*.

**Hartmann, B. M.** (see P. Shi)

**Hayne, R. H.**

[1999] *Unearned premium reserves: Change is in the wind*. In: *CAS Forum Fall 1999*, pp. 177–205.

**Hayne, R. M.**

[1985] *An estimate of statistical variation in development factor methods*. Proc. CAS **72**, 25–37.

[1988] *Application of collective risk theory to estimate variability in loss reserves*. CAS Discussion Paper Program, pp. 265–304.

[1989] *Application of collective risk theory to estimate variability in loss reserves*. Proc. CAS **76**, 77–97 (109).

[1994] *Extended service contracts*. Proc. CAS **81**, 243–302.

[1994] *Forecasting mass action losses using a hybrid development model*. In: *CAS Forum Summer 1994*, pp. 259–.

[1994] *A method to estimate probability level for loss reserves*. In: *CAS Forum Spring 1994*, pp. 297–356.

[1999] *Unearned premium reserves: Change is in the wind*. In: *CAS Forum Fall 1999*, pp. 177–205.

[2003] *Measurement of reserve variability*. In: *CAS Forum Fall 2003*, pp. 141–171.

[2004] *Estimating and incorporating correlation in reserve variability*. In: *CAS Forum Fall 2004*, pp. 53–72.

[2008] *A stochastic framework for incremental average reserve models*. In: *CAS E-Forum Fall 2008*.

[2013] *A flexible framework for stochastic reserving models*. Variance **7**, 123–151.

**Heberle, J.** (see also L. Huergo)

[] *Bootstrapping the ultimate claims of cumulative claims payments and incurred losses data using Kalman filter theory*.

**Heberle, J., Huergo, L., and Merz, M.**

[2008] *Prognose des Abwicklungsergebnisses mittels Chain-Ladder-Verfahren für abhängige Run-off-Portfolios*. Z. Ges. Versicherungswissenschaft **97**, 439–461.

**Heberle, J., and Thomas, A.**

[2014] *Combining chain-ladder claims reserving with fuzzy numbers*. Insurance Math. Econom. **55**, 96–104.

**Hedges, B. W.** (see E. D. Dew)

**Heep-Altiner, M.** (see also D. Grönke)

- [2008] *Ein vereinfachtes Modell zur Ermittlung der Einperiodenvolatilität einer Reserve.* Der Aktuar **14**, 76–79.
- [2009] *Ein vereinfachtes Modell zur Ermittlung der Einperiodenvolatilität einer Reserve III.* Der Aktuar **15**, 5–6.
- [2009] *Ein vereinfachtes Modell zur Ermittlung der Einperiodenvolatilität einer Reserve IV.* Der Aktuar **15**, 102–105.

**Heep–Altiner, M., and Klemmstein, M.**

- [1998] *Spätschadenreserven in Haftpflicht. Ein praktisches Verfahren zu ihrer Schätzung.* Versicherungswirtschaft **53**, 182–185.
- [2001] *Versicherungsmathematische Anwendungen in der Praxis mit Schwerpunkt Kraftfahrt und Allgemeine Haftpflicht.* Karlsruhe: Verlag Versicherungswirtschaft.

**Heep–Altiner, M., and Querner, I.**

- [2008] *Ein vereinfachtes Modell zur Ermittlung der Einperiodenvolatilität einer Reserve II.* Der Aktuar **14**, 122–126.

**Henry, M.** (see D. Drieskens)

**Herbers, J. A.**

- [2002] *Materiality and statements of actuarial opinion.* In: *CAS Forum Fall 2002*, pp. 103–137.

**Herbst, T.**

- [1999] *An application of randomly truncated data models in reserving IBNR claims.* Insurance Math. Econom. **25**, 123–131.

**Hertig, J.**

- [1985] *A statistical approach to IBNR reserves in marine reinsurance.* ASTIN Bull. **15**, 171–184.

**Hess, K. T.** (see also T. Gütschow)

- [2012] *Maximum-likelihood and marginal-sum estimation in some particular collective models.* AStA Adv. Statist. Anal. **96**, 311–326.

**Hess, K. T., and Schmidt, K. D.**

- [1994] *A remark on modelling IBNR claim numbers with random delay pattern.* Dresdner Schriften zur Versicherungsmathematik 4/1994.
- [1994] *Experience reserving under vague prior information.* Dresdner Schriften zur Versicherungsmathematik 5/1994.
- [2001] *Credibility-Modelle zur Tarifierung und Reservierung.* Allg. Statist. Archiv **85**, 225–246.
- [2002] *A comparison of models for the chain-ladder method.* Insurance Math. Econom. **31**, 351–364.
- [2004] *Credibility Modelle – Schadenreservierung.* In: *Handbuch zur Schadenreservierung*, pp. 81–88. Karlsruhe: Verlag Versicherungswirtschaft.

**Hess, K. T., Schmidt, K. D., and Schnaus, A.**

- [2004] *Sequentielle Modelle.* In: *Handbuch zur Schadenreservierung*, pp. 189–197. Karlsruhe: Verlag Versicherungswirtschaft.

**Hess, K. T., Schmidt, K. D., and Wünsche, A.**

- [2004] *Multinomial-Modell.* In: *Handbuch zur Schadenreservierung*, pp. 149–154. Karlsruhe: Verlag Versicherungswirtschaft.

**Hess, K. T., Schmidt, K. D., and Zocher, M.**

- [2006] *Multivariate loss prediction in the multivariate additive model.* Insurance Math. Econom. **39**, 185–191.

**Hesselager, O.**

- [1991] *Prediction of outstanding claims: A hierarchical credibility approach.* Scand. Actuar. J., 25–47.
- [1993] *A Markov model for loss reserving.* In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 241–253.
- [1994] *A Markov model for loss reserving.* ASTIN Bull. **24**, 183–193.
- [1995] *Modelling of discretized claim numbers in loss reserving.* ASTIN Bull. **25**, 119–135.

**Hesselager, O., and Witting, T.**

- [1988] *A credibility model with random fluctuations in delay probabilities for the prediction of IBNR claims.* ASTIN Bull. **18**, 79–90.

**Hewitson, T. W.** (see C. D. Daykin)

**Hewitt, C. C.**

- [1967] *Loss ratio distributions: A model.* Proc. CAS **44**, 70–86.

**Heyer, D. D.**

- [2001] *A random walk model for paid loss development.* In: *CAS Forum Fall 2001*, pp. 239–254.

**Hiabu, M.** (see also T. Agbeko)

- [2017] *On the relationship between classical chain ladder and granular reserving.* Scand. Actuar. J., 708–729.

**Hindley, D.** (see C. J. W. Czapiewski, J. Harding)

**Hines, A. M.**

- [2015] *The actuary's role in a risk-focused statutory examination.* In: *CAS E-Forum Fall 2015*.

**Hodes, D., Feldblum, S., and Blumsohn, G.**

- [1999] *Workers compensation reserve uncertainty.* Proc. CAS **86**, 263–392.

**Hoedemakers, T., Beirlant, J., Goovaerts, M., and Dhaene, J.**

- [2003] *Confidence bounds for discounted loss reserves.* Insurance Math. Econom. **33**, 297–316.
- [2005] *On the distribution of discounted loss reserves using generalized linear models.* Scand. Actuar. J., 25–45.

**Hofmeister, E.**

- [1961] *Bemerkungen zur Berechnung der Schwankungsrückstellung in der Brandversicherung.* ASTIN Bull. **1**, 279–286.

**Holmberg, R. D.**

- [1994] *Correlation and the measurement of loss reserve variability.* In: *CAS Forum Spring 1994*, pp. 247–278.

**Holt, M. S.** (see B. A. Jones)

**Homewood, C. J.**

- [1968] *Verification of technical reserves with particular reference to motor insurance.* OECD report by the Working Party on the verification of technical reserves.
- [1974] *An administrator's definition of the problem.* In: *Claims Provisions for Non-Life Insurance Business*, pp. 3–14.

**Horowitz, B. A.**

- [2013] *Aggregate loss reserve analysis by accounting date.* In: *CAS E-Forum Fall 2013*.

**Hossack, I. B., Pollard, J. H., and Zehnirith, B.**

- [1983] *Introductory Statistics with Applications in General Insurance.* London – New York: Cambridge University Press.

[1999] *Introductory Statistics with Applications in General Insurance*. Second Edition. London – New York: Cambridge University Press.

**Hössjer, O.** (see S. Björkwall, R. J. Verrall)

**Houltram, A.**

[2003] *Reserving judgement*. Inst. Actuar. Austral. Gen. Insurance Sem. **14**, .

**Hovinen, E.**

[1969] *Procedures and basic statistics to be used in magnitude control of equalisation reserves in Finland*. ASTIN Bull. **5**, 227–238.

[1981] *Additive and continuous IBNR*. ASTIN Colloquium Loen/Norway.

**Howe, B. A.** (see D. G. Hart)

**Hoyt, R. E.** (see L. L. Colquitt)

**Hudecová, Š** (see also M. Pešta)

**Hudecová, Š., and Pešta, M.**

[2013] *Modeling dependencies in claims reserving with GEE*. Insurance Math. Econom. **53**, 786–794.

**Huergo, L.** (see also J. Heberle)

**Huergo, L., Heberle, J., Merz, M.**

[2010] *Bootstrapping the chain-ladder method for several correlated run-off triangles*. Z. Ges. Versicherungswissenschaft **98**, 541–564.

**Hürlimann, W.**

[1998] *Distribution-free excess-of-loss reserves for some actuarial protection models*. In: *Trans. 26th Int. Congress of Actuaries*, vol. 4, pp. 291–317.

[2006] *Approximate bounds for the IBNR reserves based on the bivariate chain-ladder model*. Belgian Actuar. Bull. **5**, 46–51.

[2009] *Credible loss ratio claims reserves – The Benktander, Neuhaus and Mack methods revisited*. ASTIN Bull. **33**, 81–99.

[2015] *A power law extrapolation–interpolation method for IBNR claims reserving*. Science Journal of Applied Mathematics and Statistics, **3**, pp. 6–13.

[] *A gamma IBNR claims reserving model with dependent development periods*

**Hussian, P. R.** (see P. J. Struzzieri)

**Irniger, R.**

[1979] *Die Eigenvektoren der Abwicklungsmatrix*. Bull. SAV, 31–40.

**Isaacs, B.** (see G. S. Kirscher)

**Jansen, J. H. C.**

[1969] *Introductory report*. ASTIN Bull. **5**, 169–176.

**Jeng, H.**

[2010] *On small samples and the use of robust estimators in loss reserving*. In: *CAS E-Forum Fall 2010*.

**Jessen, A. H.** (see also R. J. Verrall)

[2009] *Chain Ladder and its Extensions*. PhD Thesis, Copenhagen.

**Jessen, A. H., Mikosch, T., and Samorodnitsky, G.**

[2009] *Prediction of outstanding payments in a Poisson cluster model*. Preprint.

**Jessen, A. H., and Rietdorf, N.**

[2011] *Diagonal effects in claims reserving*. Scand. Actuar. J., 21–37.

**Jewell, W. S.**

[1989] *Predicting IBNYR events and delays I. Continuous time*. ASTIN Bull. **19**, 25–56.

[1990] *Predicting IBNYR events and delays II. Discrete time*. ASTIN Bull. **20**, 93–111.

**Johnson, R. L.**

[1980] *A generalized statement of the claims runoff process*. Inst. Actuar. Austral. Gen. Insurance Sem. **2**, 240–262.

**Johnson, W. A.**

[1989] *Determination of outstanding liabilities for unallocated loss adjustment expenses*. Proc. CAS **76**, 111–125.

**Jones, B. A., Scukas, C. J., Frerman, K. S., Holt, M. S., and Fendley, V. A.**

[2013] *A mortality-based approach to reserving for lifetime workers' compensation claims*. In: *CAS E-Forum Fall 2013*.

**Jones, D. A.**

[2004] *An introduction to reserving and financial reporting issues for non-traditional reinsurance*. In: *CAS Forum Fall 2004*, pp. 73–105.

**Juarez, M. A.** (see E. de Alba)

**Kaas, R.** (see D. Dannenburg, M. J. Goovaerts)

**Kahn, J. B.** (see also O. M. Linden)

[2002] *Reserving for runoff operations – A real life claims specific methodology for reserving a workers compensation runoff entity*. In: *CAS Forum Fall 2002*, pp. 139–210.

**Kaminsky, K. S.**

[1987] *Prediction of IBNR claim counts by modelling the distribution of report lags*. Insurance Math. Econom. **6**, 151–159.

**Kappeler, G. E.** (see B. Z. Brown)

**Karlsson, J. E.**

[1974] *A stochastic model for time lag in reporting of claims*. J. Appl. Probab. **11**, 382–387.

[1976] *The expected value of IBNR claims*. Scand. Actuar. J., 108–110.

**Kaye, D.**

[2015] *Premium deficiency reserve evaluation for mortgage insurers*. In: *CAS E-Forum Fall 2015*.

**Kazenski, P. M.**

[1994] *Recognition, measurement and disclosure of environmental liabilities*. In: *CAS Forum Summer 1994*, pp. 367–400.

**Kastelijjn, W. M.** (see G. W. De Wit)

**Kaulfuss, S., and Schmidt, K. D.**

[2004] *Lognormales Loglineares Modell: Schadenreservierung*. In: *Handbuch zur Schadenreservierung*, pp. 135–139. Karlsruhe: Verlag Versicherungswirtschaft.

**Kaye, D.**

[2013] *Estimating unpaid claim liabilities for mortgage insurance*. In: *CAS E-Forum Fall 2013*.

[2015] *Premium deficiency reserve evaluation for mortgage insurers*. In: *CAS E-Forum Fall 2015*.



**Kedney, P.** (see G. Lyons)

**Kerley, C.** (see G. S. Kirschner)

**Kerper, J., and Bowron, L.**

[2007] *An exposure based approach to automobile warranty ratemaking and reserving.* In: *CAS Forum Winter 2007*, pp. 159–173.

[2007] *An exposure based approach to automobile warranty ratemaking and reserving.* In: *CAS Forum Spring 2007*, pp. 29–43.

**Khury, C. K.** (see also I. K. Bass)

[1971] *IBNR methods for the liability excess of loss reinsurer.* In: *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition*, pp. 65–95. Amsterdam: Nederlandse Reassurantie Groep NV.

[1980] *Loss reserves: Performance standards.* Proc. CAS **67**, 1–21.

[2002] *Testing the reasonableness of loss reserves: Reserve Ratios.* Proc. CAS **89**, 23–67.

**Kim, C. J.**

[1994] *A generalized framework for the stochastic loss reserving.* In: *CAS Forum Spring 1994*, pp. 653–.

**Kirschner, G. S.** (see also J. C. Balester)

**Kirschner, G. S., Kerley, C., and Isaacs, B.**

[2002] *Two approaches to calculating correlated reserve indications across multiple lines of business.* In: *CAS Forum Fall 2002*, pp. 211–245.

[2008] *Two approaches to calculating correlated reserve indications across multiple lines of business.* *Variance* **2**, 15–38.

**Kittel, J.**

[1981] *Unallocated loss adjustment expense reserves in an inflationary economic environment.* In: *Inflation Implications for Property Casualty Insurance.* CAS Discussion Paper Program, pp. 311–331.

**Klemmstein, M.** (see M. Heep–Altiner)

**Klemmt, H. J.**

[2005] *Separierung von Abwicklungsdreiecken nach Basisschäden und Großschäden.* *Blätter DGVM* **27**, 49–58.

**Kline, C. D. jr.** (see M. Adler)

**Klinger, A.** (see B. Verdier)

**Klinker, F. L.**

[1997] *The parameter variance adjustment in lognormal linear models for loss reserves: Bayesian versus frequentists analysis.* In: *CAS Forum Winter 1997*, pp. 35–54.

**Kloberdanz, K., and Schmidt, K. D.**

[2008] *Loss prediction in a linear model under a linear constraint.* *AStA Adv. Statist. Anal.* **93**, 205–220.

**Kloek, T.**

[1998] *Loss development forecasting models: An econometrician's view.* *Insurance Math. Econom.* **23**, 251–261.

**Klugman, S. A.** (see also Z. Rehman)

[1992] *Bayesian Statistics in Actuarial Science.* Boston – Dordrecht – London: Kluwer.

**Klüppelberg, C., and Mikosch, T.**

[1995] *Delay in claim settlement and ruin probability approximations.* Scand. Actuar. J., 154–168.

[1995] *Explosive Poisson shot noise processes with applications to risk reserves.* Bernoulli **1**, 125–147.

**Klüppelberg, C., and Severin, M.**

[2001] *Prediction of outstanding insurance claims.* Preprint.

**Ko, B.** (see O. M. Linden)

**Kohn, R.** (see G. W. Peters)

**Kollo, T.** (see G. Pettere)

**Korn, U.**

[2015] *A Frequency–severity stochastic approach to loss development.* In: *CAS E–Forum Spring 2015.*

[2016] *An extension to the Cape-Cod method with credibility weighted smoothing.* In: *CAS E–Forum Summer 2016.*

**Korn, U. A.**

[2016] *A comprehensive, non–aggregated, stochastic approach to loss development.* Variance **10**, 13–33.

**Kouatly, O. D., Littmann, M. W., and Popelyukhin, A. S.**

[1997] *Synchronizing data management technologies to integrate actuarial process.* CAS Discussion Paper Program, pp. 165–199.

**Kozlowski, R. T.** (see A. S. Malhotra)

**Krämer, N., Brechmann, E. C., Silvestrini, D., and Czado, C.**

[2013] *Total loss estimation using copula–based regression models.* Insurance Math. Econom. **53**, 829–839.

**Kramreiter, H., and Straub, E.**

[1973] *On the calculation of IBNR reserves II.* Mitt. SVVM **73**, 177–190.

**Kraus, C., and Diers, D.**

[2010] *Das stochastische Re–Reserving – Ein simulationsbasierter Ansatz für die stochastische Modellierung des Reserverisikos in der Kalenderjahrsicht.* Z. Ges. Versicherungswissenschaft **99**, 41–64.

**Kremer, E.**

[1982] *IBNR claims and the two–way model of ANOVA.* Scand. Actuar. J., 47–55.

[1984] *A class of autoregressive models for predicting the final claims amount.* Insurance Math. Econom. **3**, 111–119.

[1985] *Einführung in die Versicherungsmathematik.* Göttingen: Vandenhoeck & Ruprecht.

[1989] *Loss reserving by kernel regression.* Mitt. SVVM **89**, 143–155.

[1993] *Random coefficient autoregressive loss reserving.* Blätter DGVM **21**, 237–240.

[1993] *Certain extensions of the chain–ladder technique.* Mitt. SVVM **93**, 173–186.

[1994] *Correction of: Random coefficient autoregressive loss reserving.* Blätter DGVM **21**, 653.

[1994] *Wie robustifiziert man adäquat die Schadenreservierung?* Blätter DGVM **21**, 653–654.

[1994] *Clarification of: Certain extensions of the chain–ladder technique.* Mitt. SVVM **94**, 221.

[1995] *INAR and IBNR.* Blätter DGVM **22**, 249–253.

[1995] *Correction of: Certain extensions of the chain–ladder technique.* Mitt. SVVM **95**, .

[1996] *Begründung des Chain–Ladder Verfahrens mittels Mathematischer Statistik.* Blätter DGVM **22**, 892–893.

- [1996] *Nonlinear methods in mathematical loss reserving*. In: *Trans. World Congress Nonlinear Analysis*, Athens.
- [1997] *Nonlinear models in claim reserving*. *Nonlinear Analysis* **30**, 4635–4739.
- [1997] *Robust lagfactors*. In: *Proc. 28th Int. ASTIN Colloquium Cairns 1997*, pp. 427–442.
- [1997] *Robust lagfactors*. *Blätter DGVM* **23**, 137–145.
- [1997] *Grossing up or chain-ladder?* *Blätter DGVM* **23**, 242–243.
- [1998] *More on robust lagfactors*. *Blätter DGVM* **23**, 465–471.
- [1998] *Stochastic claims inflation in IBNR*. In: *General Insurance Convention & Astin Colloquium*, vol. 2, pp. 601–617. London: Institute of Actuaries.
- [1999] *Threshold loss reserving*. *Mitt. SVVM* **99**, 191–199.
- [1999] *Stochastic claims inflation in IBNR*. *Blätter DGVM* **24**, 231–238.
- [2000] *Minimum distance loss reserving*. *Blätter DGVM* **24**, 629–634.
- [2003] *Random coefficient autoregressive loss reserving revisited*. *Blätter DGVM*, .
- [2005] *The correlated chain-ladder method for reserving in case of correlated claims developments*. *Blätter DGVM* **27**, 315–322.

**Kreps, R. E.**

- [1997] *Parameter uncertainty in (log)normal distributions*. *Proc. CAS* **84**, 553–580.
- [2002] *Management's best estimates of loss reserves*. In: *CAS Forum Fall 2002*, pp. 247–257.

**Krvavich, J.** (see E. Dal Moro)**Kuang, D., Nielsen, B., and Nielsen, J. P.**

- [2008] *Identification of the age-period-cohort and the extended chain-ladder model*. *Biometrika* **95**, 979–986.
- [2008] *Forecasting with the age-period-cohort and the extended chain-ladder model*. *Biometrika* **95**, 987–991.
- [2009] *Chain-ladder as maximum likelihood revisited*. *Annals of Actuarial Science* **4**, 105–121.
- [2011] *Forecasting in the extended chain-ladder model*. *Journal of Risk and Insurance* **78**, 345–359.
- [2015] *The geometric chain-ladder*. *Scand. Actuar. J.*, 278–300.

**Kunkler, M.**

- [2003] *Modelling zeros in stochastic reserving models*. *Insurance Math. Econom.* **34**, 23–35.
- [2006] *Modelling negatives in stochastic reserving models*. *Insurance Math. Econom.* **38**, 540–555.

**LaBella, J.** (see L. R. Goldberg)**Lakins, W. J.**

- [1998] *Efficient estimators through data segmentation*. In: *CAS Forum Fall 1998*, pp. 131–179.

**Landick, T.** (see E. D. Thomas)**Landin, D.**

- [1971] *Determining the IBNR*. In: *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition*, pp. 95–123. Amsterdam: Nederlandse Reassurantie Groep NV.

**Landriault, D., Willmot, G. E., and Xu, D.**

- [2017] *Analysis of IBNR claims in renewal insurance models*. *Scand. Actuar. J.*, 628–650.

**Lange, J. T.** (see W. H. Fisher)**Larrick, M.** (see M. D. Green)**Larsen, C. R.**

- [2007] *An individual claims reserving model*. *ASTIN Bull.* **37**, 113–132.
- [] *A dynamic claims reserving model*.

**Laufer, M.** (see G. Blumsohn)

**Lebens, J. R.** (see A. A. Bouska)

**Leifer, A.** (see D. E. A. Sanders)

**Lemaire, J.**

[1982] *Claim provisions in liability insurance.* J. Forecasting **1**, 303–318.

**Leong, J.** (see M. R. Shapland)

**Leong, W. K., Wang, S. S., and Chen, H.**

[2014] *Back-testing the ODP bootstrap of the paid chain-ladder model with actual historical claims data.* Variance **8**, 182–202.

**Lester, E. P.** (see W. H. Fisher)

**Levine, G. M.**

[1987] *Discussion of Pinto and Gogol (1987).* Proc. CAS **74**, 256–271.

[2002] *Considerations regarding materiality and range of reserves in connection with actuarial standard of practice # 36.* In: *CAS Forum Fall 2002*, pp. 259–286.

**Li, J.**

[2006] *Comparison of stochastic reserving methods.* Austral. Actuar. J., **12**, 489–569.

[2010] *Prediction error of the future claims component of premium liabilities under the loss ratio approach.* Variance **4**, 155–169.

**Li, Z.** (see R. J. Verrall)

**Lieder, D., and Fellenberg, K.**

[2008] *Quantifizierung der Reserveunsicherheit mittels stochastischer Reservierungsmodelle.* Der Aktuar **14**, 166–173.

**Linde, M.** (see D. Diers)

**Linden, O. M., and Kahn, J. B., and Ko, B.**

[2008] *Estimating the ultimate liability for a non-insurance company's revised warrants.* In: *CAS E-Forum Fall 2008*.

**Linnemann, P. U., K.**

[1980] *A multiplicative model of loss reserves: A stochastic process approach.* Working Paper No. 32, Laboratory of Actuarial Mathematics, Copenhagen.

**Linquanti, A. J.**

[] *Calculation of unearned premium reserves on interim audited risks: Monthly, quarterly and semi-annual basis.*

**Lippe, S., Sedlmair, H., and Witting, T.**

[1991] *Praxisrelevante Aspekte der Burning Cost Kalkulation.* Blätter DGVM **20**, 97–121.

**Littman, M.** (see also C. Walker)

[2015] *Reserving styles – Are actuaries in-sync with their stakeholders?.* In: *CAS E-Forum Fall 2015*.

**Littman, M. W.** (see also O. D. Kouatly)

[1988] *Loss estimation: The exposure approach.* CAS Discussion Paper Program, pp. 315–.

[1997] *How much is enough? An empirical testing of the relationship between the variability of reserve estimates and the volume of data.* In: *CAS Forum Summer 1997*, vol. 1, pp. 1–38.

[1998] *Using utility theory for describing best estimate reserves.* In: *CAS Forum Fall 1998*, pp. 181–209.

**Liu, H., and Verrall, R.**

- [2007] *A dynamic approach for predictive distributions of reserves using paid and incurred claims.* Preprint.
- [2009] *Predictive distributions for reserves which separate true IBNR and IBNER claims.* ASTIN Bull. **39**, 35–60.
- [2010] *Bootstrap estimation of the predictive distributions of reserves using paid and incurred claims.* Variance **4**, 121–135.

**Liu, Y., and Tang, Y.**

- [2005] *The problem of the outstanding claims reserve and the IBNR claims reserve – A queuing model method.* In: *Proc. Int. Conf. on Services Systems and Services Management*, vol. 1, pp. 463–466.

**Liu, Y. H.** (see U. E. Makov)**Llaguno, L., Bardis, M., Chin, R., Gwilliam, T., Hagerstrand, J., and Petzoldt, E.**

- [2017] *Reserving with machine learning: Applications for loyalty programs and individual insurance claims.* In: *CAS E-Forum Summer 2017*.

**Lo, J.** (see E. Dal Moro)**Löfdahl, B.** (see B. Djehiche)**Lommele, J. A., and McCarter, M. G.**

- [1998] *Is the "best estimate" best? Issues in recording a liability for unpaid claims, unpaid losses and loss adjustment expenses.* In: *CAS Forum Fall 1998*, pp. 211–227.

**Longley–Cook, L. H.**

- [1966] *Discussion of Balcarek (1966).* Proc. CAS **53**, 17–18.

**Lorenz, H., and Schmidt, K. D.**

- [1999] *Grossing-up, chain-ladder and marginal-sum estimation.* Blätter DGVM **24**, 195–200.
- [2004] *Grossing-Up Verfahren.* In: *Handbuch zur Schadenreservierung*, pp. 93–98. Karlsruhe: Verlag Versicherungswirtschaft.

**Lovick, T.**

- [1998] *The transitional state chain-ladder method.* In: *General Insurance Convention & Astin Colloquium*, vol. 1, pp. 479–487. London: Institute of Actuaries.

**Lowe, J.**

- [1994] *A practical guide to measuring reserve variability using bootstrapping, operational times and a distribution-free approach..* General Insurance Convention, Institute of Actuaries and Faculty of Actuaries.

**Lowe, S.**

- [1982] *Loss reserving model I.* Casualty Loss Reserve Seminar.

**Lowe, S. P.** (see E. T. Bardis)**Ludwig, A., Schmeisser, C., and Thänert, K.**

- [2009] *Loss prediction in the linear model.* Preprint TU Dresden.
- [2011] *Reserve risk estimation in a linear model.* Z. Ges. Versicherungswissenschaft **100**, 493–516.

**Ludwig, A., and Schmidt, K. D.**

- [2009] *Calendar year reserves in the multivariate additive model.* Dresdner Schriften zur Versicherungsmathematik 1/2010.
- [2010] *Gauss–Markov loss prediction in a linear model.* In: *CAS E-Forum Fall 2010*.

**Ludwig, S. J.**

- [1991] *An exposure rating approach to pricing property excess-of-loss reinsurance.* Proc. CAS **78**, 110–145.

**Lundberg, O.**

- [1977] *Note on actuarial management in inflationary conditions.* ASTIN Bull. **9**, 208–212.

**Lusk, V.**

- [1999] *Unearned premium for long-term policies.* In: *CAS Forum Fall 1999*, pp. 207–223.

**Lyons, D. K.**

- [1994] *A note on simulation of claim activity for use in aggregate loss distributions.* In: *CAS Forum Spring 1994*, pp. 357–392.

**Lyons, G.** (see also J. Harding)

**Lyons, G., Forster, W., Kedney, P, Warren, R., and Wilkinson, H.**

- [2002] *Claims reserving working party paper.* General Insurance Convention. Institute of Actuaries and Faculty of Actuaries.

**Lysenko, N.** (see M. V. Wüthrich)

**Mabee, B.** (see P. D. Miller)

**Mack, T.** (see also G. Quarg)

- [1990] *Improved estimation of IBNR claims by credibility theory.* Insurance Math. Econom. **9**, 51–57.
- [1991] *A simple parametric model for rating automobile insurance or estimating IBNR claims reserves.* ASTIN Bull. **21**, 93–109.
- [1991] *Claims reserving: The direct method and its refinement by a lag distribution.* Astin Colloquium Stockholm.
- [1993] *Distribution-free calculation of the standard error of chain-ladder reserve estimates.* ASTIN Bull. **23**, 213–225.
- [1994] *Which stochastic model is underlying the chain-ladder method?* Insurance Math. Econom. **15**, 133–138.
- [1994] *Measuring the variability of chain-ladder reserve estimates.* In: *CAS Forum Spring 1994*, pp. 101–182.
- [1997] *Measuring the variability of chain-ladder reserve estimates.* In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.
- [1997] *Schadenversicherungsmathematik.* Karlsruhe: Verlag Versicherungswirtschaft.
- [1999] *The standard error of chain-ladder reserve estimates: Recursive calculation and inclusion of a tail factor.* ASTIN Bull. **29**, 361–366.
- [2000] *Chain-ladder oder Bornhuetter-Ferguson?* Der Aktuar **6**, 88–89.
- [2000] *Credible claims reserves: The Benktander method.* ASTIN Bull. **30**, 333–347.
- [2006] *Parameter estimation for Bornhuetter-Ferguson.* In: *CAS Forum Fall 2006*, pp. 141–157.
- [2008] *The prediction error of Bornhuetter-Ferguson.* In: *CAS E-Forum Fall 2008*.
- [2008] *The prediction error for Bornhuetter-Ferguson.* ASTIN Bull. **38**, 87–103.
- [2008] *Correction note to 'The prediction error for Bornhuetter-Ferguson'.* ASTIN Bull. **38**, 669.

**Mack, T., Quarg, G., and Braun, C.**

- [2006] *The mean square error of prediction in the chain-ladder reserving method – A comment.* ASTIN Bull. **36**, 543–552.

**Mack, T., and Venter, G.**

- [2000] *A comparison of stochastic models that reproduce chain-ladder reserve estimates.* Insurance Math. Econom. **26**, 101–107.

**Madigan, K. M., and Metzner, C. S.**

- [2003] *Reserving for asbestos liabilities*. In: *CAS Forum Fall 2003*, pp. 173–212.
- Maher, G. P. M.**  
[1995] *Loss reserves in the London market*. *British Actuar. J.* **1**, 689–760.
- Maher, G. P. M., and Ryan, J. P.**  
[2000] *Evaluating claims costs arising out of political disorder and civil unrest*. In: *CAS Forum Fall 2000*, pp. 85–120.
- Maher, G. P. M., Ryan, J. P., and Samson, P.**  
[1991] *Actuarial aspects of claims reserving in the London market*. In: *International topics: Global insurance pricing, reserving and coverage issues*, pp. 387–443. New York: Casualty Actuarial Society.
- Mahon, J. B.**  
[2005] *Transition matrix theory and individual claim loss development*. In: *CAS Forum Spring 2005*, pp. 115–170.
- Mahon, M. J.**  
[1997] *The scorecard system*. In: *CAS Forum Summer 1997*, vol. 1, pp. 97–135.
- Maier, R.** (see S. Happ)
- Majidi, A.** (see E. T. Bardis, M. T. Bardis)
- Makov, U. E.** (see also J. S. K. Chan)  
[2001] *Principal applications of Bayesian methods in actuarial science: A perspective*. *North American Actuarial J.* **5**, 53–57.
- Makov, U. E., Smith, A. F. M., and Liu, Y. H.**  
[1996] *Bayesian methods in actuarial science*. *The Statistician* **45**, 503–515.
- Malhotra, A. S.** (see also E. T. Bardis)
- Malhotra, A. S. and Kozlowski, R. T.**  
[2004] *Reserving in a changing environment: Responding to the impact of layoffs, plant closures and downsizing in reserving for workers compensation liabilities*. In: *CAS Forum Fall 2004*, pp. 107–154.
- Mammen, E., Martinez Miranda, M. D., and Nielsen, J. P.**  
[2015] *In-sample forecasting applied to reserving and mesothelioma mortality*. *Insurance Math. Econom.* **61**, 76–86.
- Mango, D., and Craig, A.**  
[1999] *Two alternative methods for calculating the unallocated loss adjustment expense reserve*. In: *CAS Forum Fall 1999*, pp. 225–249.
- Marker, J. O., and Mohl, F. J.**  
[1980] *Rating claims-made insurance policies*. *CAS Discussion Paper Program*, pp. 265–304.
- Markowitz, C.**  
[2015] *An enhanced understanding of using the RAA excess casualty loss development study for reserve analysis*. In: *CAS Forum Spring 2015*, pp. 120–153.
- Martinez Miranda, M. D.** (see also T. Agbeko, E. Mammen)
- Martinez Miranda, M. D., Nielsen, B., Nielsen, J. P., and Verrall, R. J.**  
[2011] *Cash flow simulation for a model of outstanding liabilities based on claim amounts and claim numbers*. *ASTIN Bull.* **41**, 107–129.
- Martinez Miranda, M. D., Nielsen, J. P., and Verrall, R. J.**

- [2012] *Double chain ladder*. ASTIN Bull. **42**, 59–76.
- Martinez Miranda, M. D., Nielsen, J. P., Verrall, R. J., and Wüthrich, M. V.**
- [2015] *Double chain ladder, claims development inflation and zero-claims*. Scand. Actuar. J., 383–405.
- Martinez Miranda, M. D., Nielsen, J. P., and Wüthrich, M. V.**
- [2012] *Statistical modelling and forecasting of outstanding liabilities in non-life insurance*. Statistics and Operations Research Transactions **36**, 195–218.
- Masterson, N. E.**
- [1962] *Problems in motor insurance: Claim reserves*. ASTIN Bull. **2**, 152–160.
- Matitschka, H.**
- [2010] *Prognosefehler im overdispersed Poisson Modell für Abwicklungsdreiecke*. Blätter DGVMF , .
- Matsui, M.**
- [2014] *Prediction in a non-homogeneous Poisson cluster model*. Insurance Math. Econom. **55**, 10–17.
- Matthews, T. J.** (see also G. C. Taylor)
- [1979] *Discussion of Sawkins (1979)*.
- Mayer, J. H.** (see K. G. Fleming)
- Mazur, J.** (see D. Subotsky)
- McCarter, M. G.** (see J. A. Lommele)
- McClenahan, C. L.**
- [1975] *A mathematical model for loss reserve analysis*. Proc. CAS **62**, 134–145.
- [1988] *Liabilities for extended reporting endorsements guarantees under claims-made policies*. CAS Discussion Paper Program, pp. 345–364.
- [2003] *Estimation and application of ranges of reasonable estimates*. In: *CAS Forum Fall 2003*, pp. 213–230.
- McCullough, K. A.** (see L. L. Colquitt)
- McGuire, G.** (see G. C. Taylor)
- McKnight, M. B.**
- [2001] *Reserving for financial guaranty products*. In: *CAS Forum Fall 2001*, pp. 255–279.
- McLennan, A.** (see K. Murphy)
- McNichols, J. P.**
- [2003] *Monoline insurance and financial guaranty reserving*. In: *CAS Forum Fall 2003*, pp. 231–304.
- Merz, M.** (see also M. Buchwalder, S. Happ, J. Heberle, L. Huergo, R. Salzmänn, M. V. Wüthrich)
- Merz, M., and Wüthrich, M. V.**
- [2006] *A credibility approach to the Munich chain-ladder method*. Blätter DGVMF **27**, 619–628.
- [2007] *Prediction error of the expected claims development result in the chain-ladder method*. Bull. SAV, 117–137.
- [2007] *Prediction error of the chain-ladder reserving method applied to correlated run-off triangles*. Ann. Actuar. Science, , .
- [2007] *Prediction error of the multivariate chain-ladder reserving method*. North American Actuarial J. , .



- [2007] *Mittlerer quadratischer Prognosefehler bei der Prognose des Abwicklungsergebnisses mittels der Chain-Ladder Methode.* Z. Gesamte Versicherungswirtschaft Supplement, 207–238.
- [2008] *Modelling the claims development result for solvency purposes.* International ASTIN Colloquium, Manchester, 2008.
- [2008] *Modelling the claims development result for solvency purposes.* In: *CAS E-Forum Fall 2008.*
- [2009] *Prediction error of the multivariate additive loss reserving method for dependent lines of business.* Variance **3**, 131–151.
- [2009] *Combining chain-ladder and additive loss reserving methods for dependent lines of business.* Variance **3**, 270–291.
- [2010] *Paid-incurred chain claims reserving method.* Insurance Math. Econom. **46**, 568–579.
- [2013] *Estimation of tail development factors in the paid-incurred chain reserving method.* Variance **7**, 61–73.
- [2015] *Modified Munich chain-ladder method.* Risks **5**, 624–646.

**Metzner, C. S.** (see K. M. Madigan)

**Meyers, G. G.** (see also P. Shi)

- [2006] *Estimating predictive distributions for loss reserve models.* In: *CAS Forum Fall 2006*, pp. 159–203.
- [2007] *Estimating predictive distributions for loss reserve models.* Variance **1**, 248–272.
- [2008] *Stochastic loss reserving with the collective risk model.* In: *CAS E-Forum Fall 2008.*
- [2009] *Stochastic loss reserving with the collective risk model.* Variance **3**, 239–269.
- [2010] *The technical provisions in Solvency II: What EU insurers could do if they had Schedule P.* In: *CAS E-Forum Fall 2010.*
- [2012] *The leveled chain ladder model for stochastic loss reserving.* In: *CAS E-Forum Summer 2012.*
- [2014] *Quantifying calendar year risk.* Actuar. Rev. **41**, No. 2, 32–34.
- [2015] *Stochastic loss reserving using Bayesian MCMC models.* New York: Casualty Actuarial Society.
- [2016] *Dependencies in stochastic loss reserve models.* In: *CAS E-Forum Winter 2016.*
- [2017] *Combining paid and incurred data in a Bayesian MCMC model.* Actuar. Rev. **44**, No. 4, 51–55.
- [] *Thinking outside the triangle.*

**Mikosch, T.** (see A. H. Jessen, C. Klüppelberg)

**Mildenhall, S. J.**

- [2006] *A multivariate Bayesian claim count development model with closed form posterior and predictive distributions.* In: *CAS Forum Winter 2006*, pp. 451–493.

**Milidonis, A., and Grace, M. F.**

- [2008] *Tax-deductible pre-event catastrophe loss reserves: The case of Florida.* ASTIN Bull. **38**, 13–51.

**Miller, P. D.**

- [2000] *Measurement of U. S. tobacco liabilities: A burning issue or just smoke?.* In: *CAS Forum Fall 2000*, pp. 121–164.

**Miller, P. D., and Mabee, B.**

- [1994] *Geographical techniques to review and track environmental liabilities.* In: *CAS Forum Summer 1994*, pp. 401–417.

**Miller, W. J.**

[2001] *The impact of catastrophic cases on workers compensation medical loss reserves.* In: *CAS Forum Fall 2001*, pp. 281–307.

**Mohrman, D. F., and Agin, S. G.**

[1989] *Don't blame claims.* Emphasis 10–13.

**Mohl, F. J.** (see also J. O. Marker)

[1987] *Reserving for claims-made policies.* In: *1987 Casualty Loss Reserve Seminar Transcript*, pp. 384–402.

**Molinaro, L.**

[1969] *Sur la détermination de la réserve pour sinistres en suspens dans l'assurance automobile.* ASTIN Bull. **5**, 199–209.

**Moore, B., Drab, S., Christie, J., and Shah, S**

[2004] *International accounting standards applied to property and casualty insurance: Overview of reserving issues.* In: *CAS Forum Fall 2004*, pp. 155–205..

**Morelli, D.** (see M. Shane)

**Moreno, T.** (see E. de Alba)

**Moriconi, F.** (see H. Bühlmann)

**Morrell, R. K.**

[1981] *Discussion of Berry (1980).* Proc. CAS **68**, 107–110.

**Muller, T.**

[2016] *Projection for claims triangles by affine age-to-age development.* Variance **10**, 121–144.

**Müller, U.** (see M. Busse)

**Murphy, D. M.** (see also E. T. Bardis, M. T. Bardis)

[1994] *Unbiased loss development factors.* In: *CAS Forum Spring 1994*, pp. 183–246.

[1994] *Unbiased loss development factors.* Proc. CAS **81**, 154–222.

[2007] *Chain ladder reserve risk estimators.* In: *CAS E-Forum Summer 2007*.

**Murphy, K.** (see also R. R. Bhagavaluta)

**Murphy, K., and McLennan, A.**

[2006] *A method for projecting individual large claims.* In: *CAS Forum Fall 2006*, pp. 205–236.

**Narayan, P.**

[2010] *Anatomy of actuarial methods of loss reserving.* In: *CAS E-Forum Fall 2010*.

**Narayan, P., and Warthen, T. V.**

[1997] *A comparative study of the performance of loss reserving methods through simulation.* In: *CAS Forum Summer 1997*, vol. 1, pp. 175–195.

**Narvell, J.**

[1989] *Discussion of Clarke (1988).* Proc. CAS **76**, .

**Neuhaus, W.**

[1992] *IBNR models with random delay distributions.* Scand. Actuar. J., 97–107.

[1992] *Another pragmatic loss reserving method or Bornhuetter Ferguson revisited.* Scand. Actuar. J., 151–162.

[2004] *On the estimation of outstanding claims.* Austral. Actuar. J., **10**, 485–518.

**Nielsen, B.** (see D. Kuang, M. D. Martinez Miranda)

**Nielsen, J. P.** (see T. Agbeko, D. Kuang, E. Mammen, M. D. Martinez Miranda, R. J. Verrall)

**Nieto-Barajas, L.** (see E. De Alba)

**Nijssen, J. A.** (see J. Van Eeghen)

**Nolibos, A.** (see R. F. Conger)

**Norberg, R.**

[1986] *A contribution to modelling of IBNR claims.* Scand. Actuar. J., 155–203.

[1990] *Risk theory and its statistics environment.* Statistics **21**, 273–299.

[1993] *Prediction of outstanding liabilities III.* In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 255–266.

[1993] *Prediction of outstanding liabilities in non-life insurance.* ASTIN Bull. **23**, 95–115.

[1999] *Prediction of outstanding liabilities II. Model variations and extensions.* ASTIN Bull. **29**, 5–25.

**Ntzoufras, I., and Dellaportas, P.**

[2002] *Bayesian modelling of outstanding liabilities incorporating claim count uncertainty.* North American Actuarial J. **6**, 113–128.

**Oberholtzer, M. F.** (see E. D. Thomas)

**Odell, D.** (see G. Barnett)

**Oecking, S., and Sanner, A.**

[2004] *Bilanzierung und Rechnungslegung.* In: *Handbuch zur Schadenreservierung*, pp. 25–36. Karlsruhe: Verlag Versicherungswirtschaft.

**Ohlsson, E.** (see also S. Björkwall)

[2016] *Unallocated loss adjustment expense reserving.* Scand. Actuar. J., 167–180.

**Ollodart, B. E.**

[1997] *Loss estimates using S-curves: Environmental and mass tort liabilities.* In: *CAS Forum Winter 1997*, pp. 111–.

[1999] *A note on the paid Bornhuetter–Ferguson loss reserving method: Recognizing dependency on case reserves.* In: *CAS Forum Winter 1999*, pp. 405–416.

[1999] *Uncollectible reinsurance reserves.* In: *CAS Forum Fall 1999*, pp. 251–291.

**Orr, J.** (see A. also Czernuszewics)

[] *A simple multi-state reserving model.*

**Otto, D. J.** (see K. A. Blum)

**Panning, W. H.**

[2006] *Measuring loss reserve uncertainties.* In: *CAS Forum Fall 2006*, pp. 237–267.

**Papatriandafylou, A.** (see H. R. Waters)

**Partrat, C.**

[1993] *Compound model for two dependent kinds of claim.* In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 267–289.

**Partrat, C., Pey, N., and Schilling, J.**

[2005] *Delta method and reserving.* ASTIN Colloquium 2005, Zürich, Switzerland.

**Pastor, N. H.**

[2003] *A statistical simulation approach for estimating the reserve for uncollectable reinsurance.* In: *CAS Forum Fall 2003*, pp. 305–320.

**Patel, C. C., and A. Raws**

- [1998] *Statistical modelling techniques for reserve ranges: A simulation approach*. In: *CAS Forum Fall 1998*, pp. 229–255.

**Pater, R.**

- [1989] *The run-off triangle: Least squares against chain-ladder estimations*. *Blätter DGVM* **19**, 11–17.

**Patrik, G. S.**

- [1996] *Reinsurance*. In: *Foundations of Casualty Actuarial Science*. Third Edition. pp. 344–374.

**Patrik, L.** (see L. Bloom)

**Pearl, M. B., and Smith, J.**

- [2013] *An enhanced on-level approach to calculating expected loss costs*. In: *CAS E-Forum Fall 2013*.

**Pearl, M., and Tomopoulos, P.**

- [2010] *Estimation of adjusting and other expense reserves utilizing limited historical claim report, payment and closing transaction patterns*. In: *CAS E-Forum Fall 2010*.

**Peck, E. F.**

- [1995] *Discussion of Stanard (1985)*. *Proc. CAS* **82**, 104–120.

**Pentikäinen, T.** (see also R. E. Beard)

- [1962] *Reserves of motor vehicle reserves in Finland*. *ASTIN Bull.* **2**, 161–173.

**Pentikäinen, T., and Rantala, J.**

- [1986] *Run-off risks as a part of claims fluctuation*. *ASTIN Bull.* **16**, 113–148.  
[1992] *A simulation procedure for comparing different claims reserving methods*. *ASTIN Bull.* **22**, 191–216.

**Peremans, K., Segaert, P., Van Aelst, S., and Verdonck, T.**

- [2017] *Robust bootstrap procedures for the chain ladder method*. *Scand. Actuar. J.*, 870–897.

**Perkins, M.** (see M. T. S. Teng)

**Perkins, M., and Teng, M. T. S.**

- [1996] *Estimating the premium asset on retrospectively rated policies*. *Proc. CAS* **73**, 611–647.

**Pesonen, E.** (see also R. E. Beard)

- [1967] *Magnitude control of technical reserves in Finland*. *ASTIN Bull.* **4**, 248–251.

**Pešta, M.** (see also Š. Hudecová)

**Pešta, M., and Hudecová, Š**

- [2012] *Asymptotic consistency and inconsistency of the chain ladder*. *Insurance Math. Econom.* **51**, 472–479.

**Peters, G. W., Dong, A. X., and Kohn, R.**

- [2014] *A copula based Bayesian approach for paid-incurred claims models for non-life insurance reserving*. *Insurance Math. Econom.* **59**, 258–278.

**Peters, G. W., Shevchenko, P. V., and Wüthrich, M. V.**

- [2009] *Model uncertainty in claims reserving within Tweedie's compound Poisson models*. *ASTIN Bull.* **39**, 1–33.

**Peters, G. W., Wüthrich, M. V., and Shevchenko, P. V.**

- [2010] *Chain ladder method: Bayesian bootstrap versus classical bootstrap*. Insurance Math. Econom. **47**, 36–51.
- Peterson, T. M.**  
[1981] *Loss reserving property/casualty insurance*. Ernst & Whinney, pp. 461–492.
- Petit, J.**  
[1962] *Note sur la gestion automatique de la réserve pour sinistres en assurance automobile*. ASTIN Bull. **2**, 287–296.
- Petttere, G., and Kollo, T.**  
[2006] *Modelling claim size in time via copulas*. Paper presented at the ICA Paris.
- Petz, E. F.**  
[1973] *Discussion of Resony (1972)*. Proc. CAS **60**, 157–160.
- Petzoldt, E.** (see L. Llaguno)
- Pey, N.** (see C. Partrat)
- Philbrik, S. W.**  
[1986] *Reserve review of a reinsurance company*. CAS Discussion Paper Program, pp. 147–162.  
[1994] *Accounting for risk margins*. In: *CAS Forum Spring 1994*, pp. 1–87.  
[1998] *New and improved Bornhuetter–Ferguson*. Actuar. Rev. **25**, No. 4, 15–16.
- Picech, L.** (see P. Gigante)
- Pierson, F.**  
[1994] *Using the whole triangle to estimate loss reserves*. In: *CAS Forum 1994*, pp. 11–44.
- Pigeon, M., Antonio, K., and Denuit, M.**  
[2013] *Individual loss reserving with the multivariate skew normal framework*. ASTIN Bull. **43**, 399–428.  
[2014] *Individual loss reserving using paid–incurred data*. Insurance Math. Econom. **58**, 121–131.
- Pinheiro, P. J. R., Andrade e Silva, J. M., and Centeno, M. de Lourdes**  
[2000] *Bootstrap methodology in claim reserving*. J. Risk Insurance **70**, 701–714.
- Pinto, E., and Gogol, D. F.**  
[1987] *An analysis of excess loss development*. Proc. CAS **74**, 227–255.
- Pitselis, G., Grigoriadou, V., and Badounas, I.**  
[2015] *Robust loss reserving in a log–linear model*. Insurance Math. Econom. **64**, 14–27.
- Pizzinga, A.** (see R. Atherino)
- Plat, R.** (see K. Antonio)
- Pollard, J. H.** (see I. B. Hossack)
- Popelyukhin, A. S.** (see O. D. Kouatly)  
[1983] *Outstanding claims provisions: A distribution–free statistical approach*. J. Inst. Actuar. **109**, 417–433.
- Posthuma, B., Cator, E. A., Veerkamp, W., and van Zwet, E. W.**  
[2008] *Combined analysis of paid and incurred losses*. In: *CAS E–Forum Fall 2008*.
- Powell, D. S.** (see T. L. Ghezzi)
- Pröhl, C., and Schmidt, K. D.**  
[2005] *Multivariate chain–ladder*. ASTIN Colloquium 2005, Zürich.

- [2005] *Multivariate chain-ladder*. Dresdner Schriften zur Versicherungsmathematik 3/2005.
- Quarg, G.** (see also T. Mack)
- Quarg, G., and Mack, T.**
- [2004] *Munich chain-ladder*. Blätter DGVM **26**, 597–630.
- Quario, G.** (see G. Buono, G. Ferrara)
- Querner, I.** (see M. Heep–Altiner)
- Radtke, M.** (see also B. Alfermann)
- [2004] *Abwicklungsdaten*. In: *Handbuch zur Schadenreservierung*, pp. 1–5. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Cape-Cod Verfahren*. In: *Handbuch zur Schadenreservierung*, pp. 47–53. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Rückversicherung*. In: *Handbuch zur Schadenreservierung*, pp. 167–175. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Separationsverfahren*. In: *Handbuch zur Schadenreservierung*, pp. 183–188. Karlsruhe: Verlag Versicherungswirtschaft.
- Radtke, M., Reich, A., and Schmidt, K. D.**
- [2004] *Software*. In: *Handbuch zur Schadenreservierung*, pp. 209–213. Karlsruhe: Verlag Versicherungswirtschaft.
- Radtke, M., and Schmidt, K. D. (Eds.)**
- [2004] *Handbuch zur Schadenreservierung*. Karlsruhe: Verlag Versicherungswirtschaft.
- [2012] *Handbuch zur Schadenreservierung* (2. Auflage). Karlsruhe: Verlag Versicherungswirtschaft.
- Radtke, M., Schmidt, K. D., and Schnaus, A. (Eds.)**
- [2016] *Handbook on Loss Reserving*. Springer International Publishing.
- Radtke, M., and Schnaus, A.**
- [2004] *Nachlauf*. In: *Handbuch zur Schadenreservierung*, pp. 159–161. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Schadenquoten*. In: *Handbuch zur Schadenreservierung*, pp. 177–181. Karlsruhe: Verlag Versicherungswirtschaft.
- Ramsay, C. M.**
- [2005] *A new method of estimating loss reserves*. Proc. CAS **92**, 462–485.
- [2006] *A nonparametric method of estimating loss reserves*. Preprint.
- Rangelova, D.** (see D. R. Clark)
- Rantala, J.** (see also T. Pentikäinen)
- [1983] *Estimation of IBNR claims*. In: *Festschrift for Eiko Haikala on his Seventieth Birthday*. University of Tampere.
- [1983] *Experience rating of claims processes with stochastic trends*. Presented at the XVII ASTIN Colloquium Lindau.
- [1984] *An Application of Stochastic Control Theory to Insurance Business*. Acta Universitatis Tamperensis Ser. A Vol. 164.
- Rathjen, R. L.**
- [1991] *Loss reserve opinions in the principal insurance markets of the world*. CAS Discussion Paper Program, pp. 479–498.

**Raws, A.** (see C. C. Patel)

**Redant, H.** (see M. J. Goovaerts)

**Regazzoni, Y.**

[1998] *Les provisions techniques: Une approche par simulations.* In: *Trans. 26th Int. Congress of Actuaries*, vol. 4, pp. 319–333.

**Rehmann, Z.**

[2009] *Quantifying uncertainty in reserve estimates.* In: *CAS E-Forum Spring 2009.*

**Rehmann, Z., and Klugman, S.**

[2010] *Quantifying uncertainty in reserve estimates.* *Variance* **4**, 30–46.

**Reich, A.** (see also B. Alfermann, M. Radtke)

**Reich, A., and Zeller, W.**

[1988] *Spätschäden.* In: *Handwörterbuch der Versicherung*, pp. 807–809. Karlsruhe: Verlag Versicherungswirtschaft.

**Reid, D. H.**

[1978] *Claim reserves in general insurance.* *J. Inst. Actuar.* **105**, 211–296.

[1980] *Reserves for outstanding claims in non-life insurance.* In: *Trans. 21st Int. Congress of Actuaries*, vol. , pp. .

[1981] *Cahiers du CERO* **23**, 3–4.

[1986] *Discussion of methods of claim reserving in non-life insurance.* *Insurance Math. Econom.* **5**, 45–56.

[1989] *Reid's method.* In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.

[1995] *Operational time and a fundamental problem of insurance in a data-rich environment.* *Applied Stochastic Models and Data Analysis* **11**, 257–269.

**Renshaw, A. E.** (see also S. Haberman)

[1989] *Chain-ladder and interactive modelling (Claims reserving and GLIM).* *J. Inst. Actuar.* **116**, 559–587.

[1993] *Modelling the claims process in the presence of covariates.* In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 291–317.

[1994] *Modelling the claims process in the presence of covariates.* *ASTIN Bull.* **24**, 265–285.

[1994] *On the second moment properties and the implementation of certain GLIM based stochastic claims reserving models.* *Actuar. Res. Paper No. 65.*

[1994] *Claims reserving by joint modelling.* *Actuar. Res. Paper No. 72.*

**Renshaw, A. E., and Verrall, R. J.**

[1994] *The stochastic model underlying the chain-ladder technique.* *Actuar. Res. Paper No. 63.*

[1998] *A stochastic model underlying the chain-ladder technique.* *British Actuar. J.* **4**, 903–923.

**Resnick, S. I.**

[1997] *Discussion of the Danish data on large fire insurance losses.* *ASTIN Bull.* **27**, 139–151.

**Resony, A. V.**

[1972] *Allocated loss expense reserves.* *Proc. CAS* **59**, 141–149.

**Richards, W. F.**

[] *Evaluating the impact of inflation on loss reserves.*

**Riegel, U.**

[2014] *A bifurcation approach for attritional and large losses in chain ladder calculations.* *ASTIN Bull.* **44**, 127–172.

- [2015] *A quantitative study of chain ladder based pricing approaches for long-tail quota shares.* ASTIN Bull. **45**, 267–307.
- [2016] *A bifurcation approach for attritional and large losses in an additive IBNR environment.* Scand. Actuar. J., 604–623.
- Rietdorf, N.** (see A. H. Jessen)
- Robert, C. Y.**
- [2013] *Market value margin calculations under the cost of capital approach within a Bayesian chain ladder framework.* Insurance Math. Econom. **53**, 216–229.
- Robertson, J. P.**
- [1985] *Discussion of Stanard (1985).* Proc. CAS **72**, 149–153.
- Robbin, I.**
- [1986] *A Bayesian credibility formula for IBNR counts.* Proc. CAS **73**, 129–164.
- Röhr, A.**
- [2016] *Chain ladder and error propagation.* ASTIN Bull. **46**, 293–330.
- Rollins, J. W.**
- [1997] *Performance testing aggregate and structural reserving methods: A simulation approach.* In: *CAS Forum Summer 1997*, vol. 1, pp. 137–173.
- Rosenlund, S.**
- [2012] *Bootstrapping individual claim histories.* ASTIN Bull. **42**, 291–324.
- Ruohonen, M.**
- [1988] *The claims occurrence process and the IBNR problem.* In: *Trans. 23rd Int. Congress of Actuaries*, vol. , pp. 113–123.
- Russ, J. L., and Ryan, T. A.**
- [2002] *The runoff environment – Considerations for the reserving actuary.* In: *CAS Forum Fall 2002*, pp. 287–303.
- Russo, G.** (see also R. A. Weber)
- [] *Loss reserving using a continuous semi-Markov process.*
- Ryan, J. P.** (see G. P. M. Maher)
- Ryan, T. A.** (see J. L. Russ)
- Sahasrabudde, R. V.**
- [2007] *Using a claim simulation model for reserving and loss forecasting for medical professional liability.* In: *CAS Forum Winter 2007*, pp. 307–327.
- [2007] *Interpretations of semi-parametric mixture models, unbiased estimators of ultimate value for individual claims and conditional probability applications to calculate bulk reserves.* In: *CAS Forum Spring 2007*, pp. 89–97.
- [2008] *Consideration of the bias in chain-ladder estimates.* In: *CAS E-Forum Winter 2008*.
- [2008] *Principles of the chain-ladder method: Selecting and updating claims development factors.* In: *CAS E-Forum Fall 2008*.
- [2010] *Claims development by layer: The relationship between claims development patterns, trend and claim size models.* In: *CAS E-Forum Fall 2010*.
- [2014] *Applying credibility concepts to develop weights for ultimate claim estimators.* In: *CAS E-Forum Summer 2014 Volume 2*.
- Saluz, A., Gisler, A., and Wüthrich, M. V.**
- [2011] *Development pattern and prediction error for the stochastic Bornhuetter-Ferguson claims reserving method.* ASTIN Bull. **41**, 279–313.



**Salzmann, R.** (see also P. Arbenz)

**Salzmann, R., and Wüthrich, M. V.**

[2010] *Cost-of-capital margin for a general insurance liability runoff*. ASTIN Bull. **40**, 415–451.

[2012] *Modelling accounting year dependence in runoff triangles*. European Actuarial J. **2**, 227–242.

**Salzmann, R., Wüthrich, M. V., and Merz, M.**

[2012] *Higher moments of the claims development result in general insurance*. ASTIN Bull. **42**, 355–384.

**Salzmann, R. E.**

[1984] *Estimated liabilities for losses and loss adjustment expenses*. Prentice-Hall, pp. 153–169.

[1996] *Allocated loss adjustment expense liabilities*. Proc. CAS **83**, 101–113.

**Samorodnitsky, G.** (see A. H. Jessen)

**Samson, P.** (see G. P. M. Maher)

**Sanders, D. E. A., and Leifer, A.**

[1998] *Some estimates on the standard deviation of ultimate claims when judgement is used*. In: *General Insurance Convention & Astin Colloquium*, vol. 2, pp. 569–585. London: Institute of Actuaries.

**Sanner, A.** (see S. Oecking)

**Sawkins, R. W.**

[1975] *Some problems of long-term claims in general insurance*. Trans. Inst. Actuar. Australia and New Zealand, 336–387.

[1979] *Methods of analysing claim payments in general insurance*. Trans. Inst. Actuar. Australia, 435–519.

**Scanlon, E. S.**

[1994] *Residuals and influence in regression*. Proc. CAS **81**, 123–153.

**Schewe, F.** (see G. A. Spedicato)

**Schiegl, M.**

[2002] *On the safety loading of chain-ladder estimates*. ASTIN Bull. **32**, 107–128.

[2004] *Simulation*. In: *Handbuch zur Schadenreservierung*, pp. 199–208. Karlsruhe: Verlag Versicherungswirtschaft.

[2015] *A model study about the applicability of the chain ladder method*. Scand. Actuar. J., 482–499.

**Schilling, J.** (see C. Partrat)

**Schlemmer, D. D., and Tarkowski, T.**

[2013] *Reserving in two steps – Total IBNR = Pure IBNR + IBNER*. In: *CAS E-Forum Fall 2013*.

**Schmeisser, C.** (see A. Ludwig)

**Schmid, F.**

[2008] *Loss development in workers compensation in the presence of legislative reform*. In: *CAS E-Forum Fall 2008*.

**Schmidt, K. D.** (see also T. Gütschow, K. T. Hess, S. Kaulfuss, K. Kloberdanz, A. Ludwig, H. Lorenz, C. Pröhl, M. Radtke)

[1997] *Non-optimal prediction by the chain-ladder method*. Insurance Math. Econom. **21**, 17–24.

- [1998] *Bayesian models in actuarial mathematics*. Math. Meth. Oper. Research **48**, 117–146.
- [1998] *Prediction in the linear model: A direct approach*. Metrika **48**, 141–147.
- [1998] *Unconditional credibility*. Dresdner Schriften zur Versicherungsmathematik 1/1998.
- [1999] *Chain-ladder prediction and asset liability management*. Blätter DGVM **24**, 1–9.
- [1999] *Reservierung für Spätschäden – Modellierung am Beispiel des Chain-Ladder Verfahrens*. Allg. Statist. Archiv **83**, 267–280.
- [1999] *Discussion of Halliwell (1996)*. Proc. CAS **86**, 736–747.
- [2002] *Versicherungsmathematik*. Berlin – Heidelberg – New York: Springer.
- [2002] *A note on the overdispersed Poisson family*. Insurance Math. Econom. **30**, 21–25.
- [2004] *Abwicklungsdreieck*. In: *Handbuch zur Schadenreservierung*, pp. 7–14. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Abwicklungsmuster*. In: *Handbuch zur Schadenreservierung*, pp. 15–20. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Additives Verfahren*. In: *Handbuch zur Schadenreservierung*, pp. 21–24. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Chain-Ladder Verfahren*. In: *Handbuch zur Schadenreservierung*, pp. 55–64. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Credibility Modelle: Grundlagen*. In: *Handbuch zur Schadenreservierung*, pp. 71–80. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Kollektives Modell*. In: *Handbuch zur Schadenreservierung*, pp. 111–114. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Lineare Modelle – Grundlagen*. In: *Handbuch zur Schadenreservierung*, pp. 115–122. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Lineare Modelle – Schadenreservierung*. In: *Handbuch zur Schadenreservierung*, pp. 123–130. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Lognormales Loglineares Modell – Grundlagen*. In: *Handbuch zur Schadenreservierung*, pp. 131–134. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Multiplikative Modelle*. In: *Handbuch zur Schadenreservierung*, pp. 155–158. Karlsruhe: Verlag Versicherungswirtschaft.
- [2004] *Poisson-Modell*. In: *Handbuch zur Schadenreservierung*, pp. 163–166. Karlsruhe: Verlag Versicherungswirtschaft.
- [2006] *Versicherungsmathematik*. 2. Auflage. Berlin – Heidelberg – New York: Springer.
- [2006] *Methods and models of loss reserving based on run-off triangles – A unifying survey*. In: *CAS Forum Fall 2006*, pp. 269–317.
- [2006] *Optimal and additive loss reserving for dependent lines of business*. In: *CAS Forum Fall 2006*, pp. 319–351.
- [2009] *Versicherungsmathematik*. 3. Auflage. Berlin – Heidelberg – New York: Springer.
- [2012] *Loss prediction based on run-off triangles*. AStA Adv. Statist. Anal. **96**, 265–310.

**Schmidt, K. D., and Schnaus, A.**

- [1996] *An extension of Mack's model for the chain-ladder method*. ASTIN Bull. **26**, 247–262.

**Schmidt, K. D., and Wünsche, A.**

- [1998] *Chain-ladder, marginal-sum and maximum-likelihood estimation*. Blätter DGVM **23**, 267–277.
- [2004] *Marginalsummenverfahren*. In: *Handbuch zur Schadenreservierung*, pp. 145–147. Karlsruhe: Verlag Versicherungswirtschaft.

**Schmidt, K. D., and Zocher, M.**

- [2005] *Loss reserving and Hofmann distributions*. Bull. SAV, 127–162.
- [2008] *The Bornhuetter-Ferguson principle*. Variance **2**, 85–110..

**Schmidt-Salzer, J.**

[1984] *IBNR und Spätschadenreservierung in der Allgemeinen Haftpflichtversicherung*. Karlsruhe: Verlag Versicherungswirtschaft.

**Schmitz, M. C.** (see B. Z. Brown)

**Schnaus, A.** (see also K. T. Hess, M. Radtke, K. D. Schmidt)

[2004] *Bornhuetter–Ferguson Verfahren*. In: *Handbuch zur Schadenreservierung*, pp. 37–46. Karlsruhe: Verlag Versicherungswirtschaft.

[2004] *Expected–Loss Verfahren*. In: *Handbuch zur Schadenreservierung*, pp. 89–91. Karlsruhe: Verlag Versicherungswirtschaft.

[2004] *Loss–Development Verfahren*. In: *Handbuch zur Schadenreservierung*, pp. 141–144. Karlsruhe: Verlag Versicherungswirtschaft.

**Schnieper, R.** (see also H. Bühlmann)

[1991] *Separating true IBNR and IBNER claims*. ASTIN Bull. **21**, 111–127.

**Scollnik, D. P. M.**

[2001] *Actuarial modelling with MCMC and BUGS*. North American Actuarial J. **5**, 96–124.

[2002] *Regression models for bivariate loss data*. North American Actuarial J. **6**, 67–80.

[2002] *Implementation of four models for outstanding liabilities in WinBUGS. Discussion of Ntzoufras and Dellaportas [2002]*. J. Actuarial Practice **6**, 128–136.

[2002] *Implementation of four models for outstanding liabilities in WinBUGS. Discussion of Ntzoufras and Dellaportas [2002]*. North American Actuarial J. **6**, 128–136. ???

[2002] *Modelling size of loss distributions for exact data in WinBUGS*. J. Actuarial Practice **6**, 220–227.

[2003] *Bayesian reserving models inspired by chain–ladder methods and implemented using WinBUGS*. Preprint.

[2006] *A damaged generalized Poisson model and its application to reported and unreported accident counts*. ASTIN Bull. **36**, 463–487.

**Scukas, C. J.** (see B. A. Jones)

**Sedlmair, H.** (see S. Lippe)

**Segaert, P.** (see K. Peremans)

**Serra, B.** (see A. Gillet)

**Severin, M.** (see C. Klüppelberg)

**Shah, S.** (see B. Moore)

**Shane, M., and Morelli, D.**

[2013] *Using life expectancy to inform the estimate of tail factors for workers compensation liabilities*. In: *CAS E–Forum Fall 2013*.

**Shapland, M. R.**

[2003] *Loss reserve estimates: A statistical approach for determining ‘reasonableness’*. In: *CAS Forum Fall 2003*, pp. 312–360.

[2007] *Loss reserve estimates: A statistical approach for determining ‘reasonableness’*. Variance **1**, 120–148.

**Shapland, M. R., and Courchene, J. A.**

[2016] *The actuary and enterprise risk management – Integrating reserve variability*. In: *CAS E–Forum Summer 2016*.

**Shapland, M. R., and Leong, J.**

[2010] *Bootstrap modelling: Beyond the basics*. In: *CAS E–Forum Fall 2010*.

**Shapland, M. R., and Xiao, P.**

[2016] *Using the Hayne MLE models – A practitioner’s guide*. In: *CAS E-Forum Summer 2016*.

**Shepley, S.** (see C. J. W. Czapiewski)

**Sherman, R. E.** (see also J. R. Berquist)

[1984] *Extrapolating, smoothing, and interpolating development factors*. Proc. CAS **71**, 122–155.

[1986] *Discussion of Guiahi (1986)*. Proc. CAS **73**, 108–110.

[1998] *Estimating the variability of loss reserves*. In: *CAS Forum Fall 1998*, pp. 257–304.

**Sherman, R. E., and Diss, G. F.**

[2004] *Estimating the workers’ compensation tail*. In: *CAS Forum Fall 2004*, pp. 207–282.

**Shevchenko, P. V.** (see G. W. Peters)

**Shi, P.**

[2014] *A copula regression for modeling multivariate loss triangles and quantifying reserving variability*. ASTIN Bull. **44**, 85–102.

**Shi, P., Basu, S., and Meyers, G. G.**

[2012] *A Bayesian log-normal model for multivariate loss reserving*. North American Actuarial J. **16**, 29–51.

**Shi, P., and Frees, E. W.**

[2011] *Dependent loss reserving using copulas*. ASTIN Bull. **41**, 449–486.

**Shi, P., and Hartman, B. M.**

[2014] *Credibility in loss reserving*. In: *CAS E-Forum Summer 2014*.

**Siewert, J. J.**

[1996] *A model for reserving workers compensation high deductibles*. In: *CAS Forum Summer 1996*, pp. 217–244.

**Sigalotti, L.** (see P. Gigante)

**Silvestrini, D.** (see N. Krämer)

**Simon, L. J.**

[1970] *Distortion in IBNR factors*. Proc. CAS **57**, 64–68.

**Skrodenis, D. P.** (see C. P. Walker)

**Skurnick, D.**

[1973] *A survey of loss reserving methods*. Proc. CAS **60**, 16–62.

[1974] *Discussion of Fisher and Lange (1973)*. Proc. CAS **61**, 73–83.

[1976] *Discussion of McClenahan (1975)*. Proc. CAS **63**, 125–127.

**Smith, A. F. M.** (see U. E. Makov)

**Smith, J.** (see M. B. Pearl)

**Sommer, D. B.** (see T. V. Warthen)

**Spalla, J.**

[1999] *Using claim department work measurement systems to determine claim adjustment expense reserves*. In: *CAS Forum Fall 1999*, pp. 293–333.

**Spedicato, G. A., Clemente, A. G. P., and Schewe, F.**

[2014] *The use of GAMLSS in assessing the distribution of unpaid claims reserves*. In: *CAS E-Forum Summer 2014*.

**Speights, D. B., Brodsky, J. B., and Chudova, D. L.**

- [1999] *Using neuronal networks to predict claim duration in the presence of right censoring and covariates.* In: *CAS Forum Winter 1999*, pp. 255–278.

**Spore, L. B.**

- [1998] *Techniques for the conversion of loss development factors.* In: *CAS Forum Summer 1998*, pp. 373–.

**Spreeuw, J., and Goovaerts, M. J.**

- [1998] *Prediction of claim numbers based on hazard rates.* *Insurance Math. Econom.* **23**, 59–69.

**Stanard, J. N.** (see also C. A. Hachemeister)

- [1980] *Experience rates as estimators – A simulation of their bias and variance.* *CAS Discussion Paper Program*, pp. .

- [1985] *A simulation test of prediction errors of loss reserve estimation techniques.* *Proc. CAS* **72**, 124–148.

**Staudt, A.** (see also T. Boles)

- [2015] *Movement analysis.* In: *CAS E-Forum Fall 2015*.

**Steenek, L. R.**

- [1996] *Actuarial note on workmen's compensation loss reserves – 25 years later.* In: *CAS Forum Summer 1996*, pp. 245–271.

- [1998] *Commutation of claims.* *CAS Study Note*.

- [1999] *Declaratory judgement action expense reserving.* In: *CAS Forum Fall 1999*, pp. 335–358.

**Stein, M. S.** (see R. Stein)

**Stein, R., and Stein, M. S.**

- [1998] *Sources of bias and inaccuracy in the development of a best estimate.* In: *CAS Forum Fall 1998*, pp. 305–351.

**Stelljes, S.**

- [2006] *A nonlinear regression model for incurred but not reported losses.* In: *CAS Forum Fall 2006*, pp. 353–377.

**Stock, R.** (see J. Harding)

**Straub, E.** (see also H. Bühlmann, H. Kramreiter)

- [1971] *On the calculation of IBNR reserves.* In: *IBNR – The Prize Winning Papers in the Boleslaw Monic Fund competition*, pp. 123–132. Amsterdam: Nederlandse Reassurantie Groep NV.

- [1978] *IBNR: A difficult marriage between practice and theory.* In: *IBNR – Proc. First Meeting Contactgroup Actuarial Sciences*, pp. 29–36.

- [1988] *Non-Life Insurance Mathematics.* Berlin – Heidelberg – New York: Springer.

**Strube, D.** (see D. Dubois du Montreynaud)

**Struppeck, T.**

- [1999] *Premium earning patterns for multi-year policies with aggregate deductibles.* In: *CAS Forum Fall 1999*, pp. 359–392.

- [2001] *Markovian annuities and insurances.* In: *CAS Forum Fall 2001*, pp. 309–346.

- [2014] *Combining Estimates.* In: *CAS E-Forum Summer 2014 Volume 2*.

**Struzzieri, P. J., and P. R. Hussian**

- [1998] *Using best practices to determine a best reserve estimate.* In: *CAS Forum Fall 1998*, pp. 353–413.

**Subotsky, D., and Mazur, J.**

- [2006] *How do you square the triangle.* *Reinsurance* 28–29.

**Sullivan, J.** (see G. C. Taylor)

**Svendsen, O. A.**

- [1993] *A deterministic method for claims reserving in non-life insurance.* In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 319–345.

**Tampubolon, D. R.** (see G. G. Venter)

**Tang, Y.** (see Y. Liu)

**Tarbell, T. F.**

- [1934] *Incurred but not reported claim reserves.* Proc. CAS **20**, 275–280.  
 [1971] *Incurred but not reported claim reserves.* Proc. CAS **58**, 84–89.

**Tarkowski, T.** (see D. D. Schlemmer)

**Taylor, G. C.** (see also B. Avanzi)

- [1977] *Some practical variations of the separation method.* General Insurance Bull. **11**, 9–16.  
 [1977] *Separation of inflation and other effects from the distribution of non-life insurance claim delays.* ASTIN Bull. **9**, 219–230.  
 [1978] *Testing goodness-of-fit of an estimated run-off triangle.* ASTIN Bull. **10**, 78–86.  
 [1978] *An investigation of the use of weighted averages in the estimation of the mean of a long-tailed claim size distribution.* ASTIN Bull. **10**, 87–148.  
 [1978] *Statistical testing of a non-life insurance run-off model.* In: *IBNR – Proc. First Meeting Contactgroup Actuarial Sciences*, pp. 37–64.  
 [1980] *A reduced Reid method of estimation of outstanding claims.* Inst. Actuar. Austral. Gen. Insurance Sem. **2**, 263–334.  
 [1981] *Speed of finalisation of claims and claims run-off analysis.* ASTIN Bull. **12**, 81–100.  
 [1982] *Application of actuarial techniques to non-life insurance establishments of provisions for outstanding claims.* In: *The Application of Mathematics in Industry*, pp. 87–136.  
 [1982] *Estimation of outstanding reinsurance recoveries on the basis of incomplete information.* Insurance Math. Econom. **1**, 3–11.  
 [1982] *Zehnwirth's comments on the see-saw method: A reply.* Insurance Math. Econom. **1**, 105–108.  
 [1983] *An invariance principle for the analysis on non-life insurance claims.* J. Inst. Actuar. **110**, 205–242.  
 [1985] *Combination of estimates of outstanding claims in non-life insurance.* Insurance Math. Econom. **4**, 81–91.  
 [1986] *Claims Reserving in Non-Life Insurance.* Amsterdam – New York: North-Holland.  
 [1987] *Regression models in claims analysis I. Theory.* Proc. CAS **74**, 354–383.  
 [1988] *Regression models in claims analysis II.* William M.M. Campbell, Cook, Knight, Sydney, Australia.  
 [1997] *Reserving consecutive layers of inwards excess-of-loss reinsurance.* Insurance Math. Econom. **20**, 225–242.  
 [2000] *Loss Reserving – An Actuarial Perspective.* Boston – Dordrecht – London: Kluwer.  
 [2003] *Chain-ladder bias.* ASTIN Bull. **33**, 313–330.  
 [2003] *Loss reserving techniques: Past, present and future.* ASTIN Colloquium, Berlin.  
 [2004] *Risk and discounted loss reserves.* North American Actuarial J. **8**, 37–44.  
 [2009] *The chain ladder and Tweedie distributed claims data.* Variance **3**, 96–104.  
 [2011] *Chain-ladder correlations.* Variance **5**, 115–123.  
 [2011] *Maximum likelihood and estimation efficiency of the chain-ladder.* ASTIN Bull. **41**, 131–155.  
 [2015] *Bayesian chain-ladder models.* ASTIN Bull. **45**, 75–99.  
 [2017] *Existence and uniqueness of chain ladder solutions.* ASTIN Bull. **47**, 1–41.

**Taylor, G. C., and Ashe, F. R.**

- [1983] *Second moments of estimates of outstanding claims.* J. Econometrics **23**, 37–61.
- Taylor, G. C., and Buchanan, R. A.**
- [1988] *The management of solvency.* In: *Classical Insurance Solvency Theory*, vol. 1, pp. . Boston: Kluwer
- Taylor, G. C., and Matthews, T. J.**
- [1977] *Experimentation with the estimation of the provision for outstanding claims in non-life insurance.* Trans. Inst. Actuar. Australia, 178–254.
- Taylor, G. C., and McGuire, G.**
- [2004] *Loss Reserving with GLMs – A Case Study.* CAS Discussion Paper Program, pp. 327–391.
- [2007] *A synchronous bootstrap to account for dependencies between lines of business in the estimation of loss reserve prediction error.* North American Actuarial J. **11**, 70–88.
- [2009] *Adaptive reserving using Bayesian revision for the exponential dispersion family.* Variance **3**, 105–130.
- Taylor, G. C., McGuire, G., and Greenfield, A.**
- [2003] *Loss Reserving – Past, present and future.*
- Taylor, G. C., McGuire, G., and Sullivan, J.**
- [2006] *Individual claim loss reserving conditioned by case estimates.*
- Taylor, G. C., and Xu, J.**
- [2016] *An empirical investigation of the value of claim closure count information to loss reserving.* Variance **10**, 75–120.
- Tedesco, L.** (see D. Dickson)
- Teng, M. T. S.** (see also M. Perkins)
- [2001] *Projecting workers compensation losses using open claim count and average loss payment, and application to analysis of California workers compensation loss development.* In: *CAS Forum Fall 2001*, pp. 347–392.
- Teng, M. T. S., and Perkins, M.**
- [1996] *Estimating the premium asset on retrospectively rated policies.* Proc. CAS **83**, 611–647.
- Thänert, K.** (see A. Ludwig)
- Theismann, H.**
- [2008] *Ein stochastisches Modell für das einjährige Reserverisiko.* Der Aktuar **14**, 158–162.
- Thomas, A.** (see J. Heberle)
- Thomas, E. D., Oberholtzer, M. F., and Landick, T.**
- [2008] *Corporate governance and the loss reserving process. (1986).* In: *CAS E-Forum Fall 2008*.
- Thorne, J. O.**
- [1978] *Discussion of Berquist and Sherman (1977).* Proc. CAS **65**, 10–33.
- Tiller, M. W.**
- [1986] *Discussion of Guiahi (1986).* Proc. CAS **73**, 111–112.
- Tinney, P.** (see T. R. Vaughn)
- Tomberlin, T. J.** (see H. I. Weisberg)
- Tomopoulos, P.** (see M. Pearl)
- Trahan, P** (see C. Cantin)
- Truckle, W. W.**

- [1978] *Estimating claims reserves in general insurance*. GIRO **20**, 3–17.
- Tu, S. T.**
- [1998] *Stochastic modeling and error correlation in dynamic financial analysis*. In: *CAS Forum Summer 1998*, pp. 207–220.
- [1998] *The application of cumulative distribution functions in the stochastic chain-ladder model*. In: *CAS Forum Summer 1998*, pp. 389–413.
- Unzeitigová, V.**
- [1997] *Estimation of IBNR reserves*. Preprint.
- Van Aelst, S.** (see K. Peremans)
- Van der Wardt, M.** (see H. Waszink)
- Van Eeghen, J.**
- [1981] *Loss Reserving Methods*. Rotterdam: Nationale Nederlanden.
- Van Eeghen, J., Greup, E. K., and Nijsen, J. A.**
- [1983] *Rate Making*. Rotterdam: Nationale Nederlanden.
- Van Heerwaarden, A. E.** (see M. J. Goovaerts)
- Van Slyke, O. E.** (see R. A. Weber)
- Van Wouwe, M.** (see T. Verdonck)
- Van Zwet, E. W.** (see B. Posthuma)
- Vaughan, R. L.**
- [1998] *Some extensions of J. N. Stanard's simulation model for loss reserving*. In: *CAS Forum Fall 1998*, pp. 415–498.
- [2017] *Residual loss development and the UPR*. In: *CAS E-Forum Spring 2017*.
- Vaughn, T. R., and Tinney, P.**
- [2004] *The modified Bornhuetter-Ferguson approach to IBNR allocation*. Proc. CAS **91**, 1–13.
- Veerkamp, W.** (see B. Posthuma)
- Venter, G. G.** (see also T. Mack)
- [1986] *Discussion of Robbin (1986)*. Proc. CAS **73**, 165–167.
- [1989] *A three-way credibility approach to loss reserving*. Insurance Math. Econom. **8**, 63–69.
- [1990] *Transformed beta and gamma distributions and aggregate losses*. Proc. CAS **70**, 156–165.
- [1994] *Introduction to selected papers from the variability in reserves prize program*. In: *CAS Forum Spring 1994*, pp. 91–100.
- [1998] *Liability modelling: Empirical tests of loss emergence generators*. In: *General Insurance Convention & Astin Colloquium*, vol. 2, pp. 421–443. London: Institute of Actuaries.
- [1998] *Testing the assumption of age-to-age factors*. Proc. CAS **85**, 807–847.
- [2006] *Discussion of the mean square error of prediction in the chain-ladder reserving method*. ASTIN Bull. **36**, 566–571.
- [2007] *Generalized linear models beyond the exponential family with loss reserve applications*. In: *CAS E-Forum Summer 2007*.
- [2007] *Refining reserve runoff triangles*. In: *CAS E-Forum Summer 2007*.
- [2008] *Distribution and value of reserves using paid and incurred triangles*. In: *CAS E-Forum Fall 2008*.
- [] *Reducing the variance of reserve estimates*.
- Venter, G. G., Gradwell, J. W., Ashab, M. Q., and Bushel, A.**
- [1998] *Implications of reinsurance and reserves on risk on investment asset allocation*. In: *CAS Forum Summer 1998*, pp. 221–271.



**Venter, G. G., and Tampubolon, D. R.**

- [2008] *Robustifying reserves*. In: *CAS E-Forum Fall 2008*.  
[2010] *Robustifying reserving*. *Variance* **4**, 136–154.

**Vera, G.**

- [2003] *A generic risk reserving model: A fundamental risk analysis*. In: *CAS Forum Fall 2003*, pp. 361–376.  
[2006] *Multilevel non-linear random effects claims reserving methodologies and data variability structures*. In: *CAS Forum Fall 2006*, pp. 379–439.

**Verbeek, H. G.**

- [1972] *An approach to the analysis of claims experience in motor liability excess of loss reinsurance*. *ASTIN Bull.* **6**, 195–202.

**Verdier, B., and Klinger, A.**

- [2005] *JAB chain: A model-based calculation of paid and incurred loss development factors*. *ASTIN Colloquium 2005 Zürich*.

**Verdonck, T.** (see also K. Peremans)**Verdonck, T., and Debruyne, M.**

- [2011] *The influence of individual claims on the chain-ladder estimates: Analysis and diagnostic tool*. *Insurance Math. Econom.* **48**, 85–98.

**Verdonck, T., and Van Wouwe, M.**

- [2011] *Detection and correction of outliers in the bivariate chain ladder method*. *Insurance Math. Econom.* **49**, 188–193.

**Verrall, R. J.** (see also T. Agbeko, P. D. England, A. H. Jessen, H. Liu, M. D. Martinez Miranda, A. E. Renshaw)

- [1988] *Bayesian linear models and the claims run-off triangle*. *Actuar. Res. Paper No. 7*.  
[1989] *Modelling claims run-off triangles with two-dimensional time series*. *Scand. Actuar. J.*, 129–138.  
[1989] *A state space representation of the chain-ladder linear model*. *J. Inst. Actuar.* **116**, 589–610.  
[1990] *Statistical aspects of outstanding claims reserving*. Preprint.  
[1990] *Bayes and empirical Bayes estimation for the chain-ladder model*. *ASTIN Bull.* **20**, 217–243.  
[1991] *Chain-ladder and maximum-likelihood*. *J. Inst. Actuar.* **118**, 489–499.  
[1991] *On the unbiased estimation of reserves from loglinear models*. *Insurance Math. Econom.* **10**, 75–80.  
[1993] *Chain-ladder with varying run-off evolutions*. In: *Proc. 24th Int. ASTIN Colloquium Cambridge 1993*, vol. 2, pp. 347–362.  
[1994] *A method for modelling varying run-off evolutions in claims reserving*. *ASTIN Bull.* **24**, 325–332.  
[1994] *Statistical methods for the chain-ladder technique*. In: *CAS Forum Spring 1994*, pp. 393–446.  
[1996] *Claims reserving and generalised additive models*. *Insurance Math. Econom.* **19**, 31–43.  
[1996] *Claims reserving*. Notes for a Short Course presented at City University.  
[2000] *An investigation into stochastic claims reserving models and the chain-ladder technique*. *Insurance Math. Econom.* **26**, 91–99.  
[2004] *A Bayesian generalised linear model for the Bornhuetter-Ferguson method of claims reserving*. *North American Actuarial J.* **8**, 67–89.  
[2004] *Obtaining predictive distributions for reserves which incorporate expert opinion*. In: *CAS Forum Fall 2004*, pp. 283–315.

- [2007] *Obtaining predictive distributions for reserves which incorporate expert opinion.* Variance **1**, 53–80.
- Verrall, R. J., and England, P. D.**
- [2000] *Comments on: A comparison of stochastic models that reproduce chain-ladder reserve estimates, by Mack and Venter.* Insurance Math. Econom. **26**, 109–111.
- [2005] *Incorporating expert opinion into a stochastic model for the chain-ladder technique.* Insurance Math. Econom. **37**, 355–370.
- Verrall, R. J., Hössjer, O., and Björkwall, S.**
- [2012] *Modelling claims run-off with reversible jump Markov chain Monte Carlo methods.* ASTIN Bull. **42**, 35–58.
- Verrall, R. J., and Li, Z.**
- [1993] *Negative incremental claims: Chain-ladder and linear models.* J. Inst. Actuar. **120**, 171–183.
- Verrall, R. J., Nielsen, J. P., and Jessen, A. H.**
- [2010] *Prediction of RBNS and IBNR claims using claim amounts and claim counts.* ASTIN Bull. **40**, 871–887.
- Verrall, R. J., and Wüthrich, M. V.**
- [2015] *Parameter reduction in log-normal chain-ladder models.* European Actuarial J. **5**, 355–380.
- Völker, D.**
- [2007] *Schadenreservierung im Licht stochastischer Prozesse.* Blätter DGVFM **28**, 291–309.
- Vulto, J. W.**
- [] *A way to calculate a confidence interval of the statistical claims reserve estimate.* Insurance Math. Econom. , .
- Wacek, M. G.**
- [2007] *The path of the ultimate loss ratio estimate.* In: *CAS Forum Winter 2007*, pp. 339–370.
- [2007] *The path of the ultimate loss ratio estimate.* Variance **1**, 173–192.
- [2007] *A test of clinical judgement vs. statistical prediction in loss reserving for commercial auto liability.* In: *CAS Forum Winter 2007*, pp. 371–404.
- [2008] *Risk margins in fair value reserves.* In: *CAS E-Forum Fall 2008*.
- Walhin, J. F.** (see D. Drieskens)
- Walker, C., and Littmann, M.**
- [2013] *Applications of reserve ranges and variability in practice.* In: *CAS E-Forum Fall 2013*.
- Walker, C. P., and Skrodenis, D. P.**
- [1996] *Death, disability and retirement coverage: Pricing the free claims-made tail.* In: *CAS Forum Winter 1996*, pp. 317–346.
- Walker, G. M.**
- [2005] *Discussion of 'The modified Bornhuetter-Ferguson approach to IBNR allocation' by Vaughn and Tinney (2004).* Proc. CAS **92**, 734–740.
- Walling, R.**
- [1999] *A dynamic approach to modeling free tail coverage.* In: *CAS Forum Fall 1999*, pp. 393–416.
- Walling, R. J., and Brandt, E. A.**
- [2013] *Effects of loss reserve margins on calendar year results – Balcarek expanded.* In: *CAS E-Forum Fall 2013*.

**Wang, S.**

[1999] *Aggregation of correlated risk portfolios – Models and algorithms*. Proc. CAS **86**, 848–939.

**Wang, S. S.** (see W. K. Leong)

**Warren, R.** (see G. Lyons)

**Warthen, T. V.** (see P. Narayan)

**Warthen, T. V., and Sommer, D. B.**

[1996] *Dynamic financial modeling – Issues and Approaches*. In: *CAS Forum Spring 1996*, pp. 291–328.

**Waszink, H., and Van der Wardt, M.**

[1998] *A stochastic model to determine IBNR reserves*. In: *General Insurance Convention & Astin Colloquium*, vol. 2, pp. 149–174. London: Institute of Actuaries.

**Waters, H. R., and Papatriandafylou, A.**

[1985] *Ruin probabilities allowing for delay in claims settlement*. Insurance Math. Econom. **4**, 113–122.

**Weber, R. A., Van Slyke, O. E., and Russo, G.**

[1997] *Loss reserve testing: Beyond popular methods*. In: *CAS Forum Summer 1997*, vol. 1, pp. 381–448.

**Weinstein, S.** (see A. Halpert)

**Weisberg, H. I., Tomberlin, T. J., and Chatterjee, S**

[1984] *Predicting insurance losses under cross-classification: A comparison of alternative approaches*. J. Business Economic Studies **2**, 170–178.

**Weiss, M.**

[1995] *A multivariate analysis of loss reserving estimates in property–liability insurers*. J. Risk Insurance **52**, 199–221.

**Weissner, E. W.** (see also F. Accomando)

[1978] *Estimation of the distribution of report lags by the method of maximum likelihood*. Proc. CAS **65**, 1–9.

[1981] *Evaluation of IBNR on a low frequency book where the report development pattern is still incomplete*. Casualty Loss Reserve Seminar Transcripts.

**Weller, A. O.**

[1995] *An algebraic reserving method for paid loss data*. In: *CAS Forum Fall 1995*, pp. 255–280.

**Welten, C. P.**

[1965] *Reserves in sanatorium insurance*. ASTIN Bull. **3**, 278–285.

[1968] *The unearned no claim bonus*. ASTIN Bull. **5**, 25–32.

**Westphal, S.** (see J. F. Butcher)

**Wettstein, C. D.** (see M. D. Green)

**White, H. G.**

[1973] *Discussion of Bornhuetter and Ferguson (1972)*. Proc. CAS **60**, 165–168.

**Wielandts, J.** (see D. Drieskens)

**Wilkinson, H.** (see G. Lyons)

**Willmot, G. E.** (see also D. Landriault)

[1990] *A queuing theoretical approach to the analysis of the claims payment process*. Trans. Soc. Actuar. **42**, 447–497.

**Winslow, M., and Carlson, J.**

[2007] *Reserve Analysis – A window on company performance*. Emphasis 2007/2, 10–13.

**Wiser, R. F.**

[1989] *Loss reserving*. In: *Foundations of Casualty Actuarial Science*, pp. 143–230. New York: Casualty Actuarial Society.

[1996] *Loss reserving*. In: *Foundations of Casualty Actuarial Science*, Second Edition, pp. 143–232. New York: Casualty Actuarial Society.

[1996] *Loss reserving*. In: *Foundations of Casualty Actuarial Science*, Third Edition, pp. 143–232. New York: Casualty Actuarial Society.

**Witting, T.** (see also O. Hesselager, S. Lippe)

[1987] *Kreditabilitätsschätzungen für die Anzahl IBNR Schäden*. Blätter DGVM **18**, 45–58.

**Wolfsdorf, K.**

[1988] *Versicherungsmathematik – Teil 2*. Stuttgart: Teubner.

**Wong, B.** (see B. Avanzi)**Wright, T. S.**

[1990] *A stochastic method for claims reserving in general insurance*. J. Inst. Actuar. **117**, 677–731.

[1992] *Stochastic claims reserving when past claim numbers are known*. Proc. CAS **79**, 255–361.

[1997] *Probability distribution of outstanding liabilities from individual payment data*. In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.

[2008] *A model to test for and accommodate reserving cycles*. In: *CAS E-Forum Fall 2008*.

[] *A general framework for forecasting numbers of claims*.

**Wu, C. P.**

[1997] *Downward bias of using high–low averages for loss development factors*. In: *CAS Forum Summer 1997*, vol. 1, pp. 197–240.

[1999] *Downward bias of using high–low averages for loss development factors*. Proc. CAS **86**, 699–735.

**Wünsche, A.** (see K. T. Hess, K. D. Schmidt)**Wüthrich, M. V.** (see also D. H. Alai, H. Bühlmann, M. Buchwalder, A. Gisler, S. Happ, M. D. Martinez Miranda, M. Merz, G. W. Peters, A. Saluz, R. Salzmann)

[2003] *Claims reserving using Tweedie’s compound Poisson model*. ASTIN Bull. **33**, 331–346.

[2007] *Using a Bayesian approach for claims reserving*. Variance **1**, 292–301.

[2008] *Prediction error in the chain–ladder method*. Insurance Math. Econom. **42**, 378–388.

[2008] *Claims development result in the chain–ladder reserving method*. Summer School Lyon 2008.

[2010] *Accounting year effects modeling in the stochastic chain ladder reserving method*. North American Actuarial J. **14**, 235–255.

[2013] *Challenges with non–informative gamma priors in the Bayesian over–dispersed Poisson reserving model*. Insurance Math. Econom. **52**, 352–358.

**Wüthrich, M. V., and Merz, M.**

[2008] *Stochastic Claims Reserving Methods in Insurance*. New York – Chichester: Wiley.

**Wüthrich, M. V., Merz, M., and Bühlmann, H.**

[2008] *Bounds on the estimation error in the chain ladder method*. Scand. Actuar. J., 283–300.

**Wüthrich, M. V., Merz, M., and Lysenko, N.**

[2009] *Uncertainty of the claims development result in the chain ladder method*. Scand. Actuar. J., 63–84.

**Xiao, P.** (see M. R. Shapland)

**Xu, D.** (see D. Landriault)

**Xu, J.** (see G. C. Taylor)

**Yamashiro, M. M.**

[2014] *Recursive credibility – Using credibility to blend reserve assumptions*. *Variance* **8**, 105–137.

**Zehnwirth, B.** (see also G. Barnett, P. De Jong, D. Dickson, I. B. Hossack)

[1981] *Taylor’s see-saw approach to claim reserving – A criticism*. *Insurance Math. Econom.* **1**, 99–102.

[1985] *Interactive claims reserving forecasting system (ICRFS)*. Benhar Nominees Pty Ltd., Tarramurra N.S.W., Australia.

[1985] *ICRFS Version 4 Manual and Users Guide*. Benhar Nominees Pty Ltd., Tarramurra N.S.W., Australia.

[1989] *The chain-ladder technique – A stochastic model*. In: *Claims Reserving Manual*, vol. 2. London: Institute of Actuaries.

[1994] *Probabilistic development factor models with applications to loss reserve variability. Prediction intervals and risk based capital*. In: *CAS Forum Spring 1994*, vol. 2, pp. 447–606.

[2003] *ICRFS-Plus 9.2 Manual*. Insureware Pty Ltd. St. Kilda, Australia.

□ *Stochastic loss reserving*.

□ *Application of credibility theory to the estimation of claim rates and claim size distributions*.

**Zeller, W.** (see A. Reich)

**Zhang, L.** (see S. P. D’Arcy)

**Zhang, Y.**

[2010] *A general multivariate chain-ladder model*. *Insurance Math. Econom.* **46**, 588–599.

□ *Prediction error of multivariate reserving models in the chain ladder framework*.

□ *Prediction error of the general multivariate chain ladder model*.

**Zhao, X., and Zhou, X.**

[2010] *Applying copula models to individual claim loss reserving methods*. *Insurance Math. Econom.* **46**, 290–299.

**Zhou, X.** (X. Zhao)

**Zocher, M.** (see K. T. Hess and K. D. Schmidt)

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