Curriculum Vitae

Personal Data

Name:	Claudia CZADO
University Address:	Technische Universität München, Zentrum Mathematik Boltzmannstr. 3 85747 Garching bei München, Germany
Birth Date:	July 19, 1959
Phone:	+49 (0)89 289-17428
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Education

Ph.D.	Operations Research and Industrial Engineering, Cornell University, Ithaca, N.Y., U.S.A., January 1989.
Thesis:	Link Misspecification and Data Selected Transformations in Binary Regression Models Supervisor: Prof. T.J. Santner
M.Sc.	Operations Research and Industrial Engineering, Cornell University, Ithaca, N.Y., U.S.A., January 1987
M.Sc.	Mathematics (Probability and Statistics) Georg-August Universität, Göttingen, Germany, May 1984.
Thesis:	Funktionale Gesetze vom Iterierten Logarithmus bei selbstähnlichen Prozessen Supervisor: Prof. Dr. M. Denker

Positions

Since Sept. 2011	Associate Professor (C3) “Angewandte Mathematische Statistik” Zentrum Mathematik, Technische Universität München
October 2008- Sept. 2011	Chair (C4) for 3 years ”Mathematische Statistik” Zentrum Mathematik, Technische Universität München
Sept. 1998 - Sept. 2008	Associate Professor (C3) “Angewandte Mathematische Statistik” Zentrum Mathematik, Technische Universität München
July 1994 - Aug. 1998	Associate Professor, Department of Mathematics and Statistics York University, Toronto, Canada.
July 1989 - June 1994	Assistant Professor, Department of Mathematics and Statistics York University, Toronto, Canada.
Jan. 1989 - May 1989	Post-Doctoral Fellow, Department of Mathematics and Statistics McGill University, Montreal, Canada.
Aug. 1988 - Dec. 1988	
Aug. 1987 - Jan. 1988	Research Assistant, Cornell University Department of Operations Research and Industrial Engineering Ithaca, N.Y., U.S.A.
Jan. 1988 - May 1988	
Aug. 1984 - May 1985	Teaching Assistant for Graduate Courses Cornell University, Department of Operations Research and Industrial Engineering, Ithaca, N.Y., U.S.A.

Honours and Awards

May 2001 - Aug. 2001	Fulbright Travel Grant for Senior Scientists
Aug. 1986 - Aug. 1987	Cornell University, Mathematical Sciences Institute Fellowship
Summers 1987 and 1988	Cornell University, Graduate School Summer Fellowship
Aug. 1982 - June 1983	Georg-August Universität - Cornell University, Graduate Exchange Fellowship

Publications

1. M.S. Taqqu, C. Czado. (1985)
   A Survey of Functional Laws of the Iterated Logarithm for Self-similar Processes.
   Stochastic Models, 1, 1-42.

2. M.S. Taqqu, C. Czado. (1985)
   Reproducing Kernel Hilbert Space for some Non-Gaussian Processes.
   Probability in Banach Spaces Vol. 5 (Proceedings, Medford 1984), Lecture Notes in Mathematics, Vol. 1153, Springer Verlag, 128-140.

3. C. Czado, T.J. Santner. (1992)
   Orthogonalizing Parametric Link Transformation Families in Binary Regression Analysis.
   The Canadian Journal of Statistics, 20, 51-61.

4. C. Czado, T.J. Santner. (1992)
   The Effect of Link Misspecification in Binary Regression Inference.
   Journal of Statistical Planning and Inference, 33, 213-231.

5. C. Czado. (1992)
   On Link Selection in Generalized Linear Models.
   in L. Fahrmeir et al.: Advances in GLIM and Statistical Modelling, Proceedings of the GLIM 92 conference and the 7th International workshop on Statistical Modelling, Munich, 13-17 July 1992.
   Lecture Notes in Statistics, Vol. 78, Springer Verlag, 60-65.

6. C. Czado. (1993)
   Norm Restricted Maximum Likelihood Estimators for Binary Regression Models with Parametric Link.
   Communications in Statistics, Theory and Methods, 22, 2259-2274.

7. C. Czado. (1994)
   Parametric Link Modification of Both Tails in Binary Regression.
   Statistical Papers, 35, 189-201.

8. C. Czado. (1994)
   Bayesian Inference of Binary Regression Models with Parametric Link.
   Journal of Statistical Planning and Inference, 41, 121-140.

9. C. Czado. (1994)
   Modeling Overdispersion in Binomial Regression.
   Proceedings of the 9th International Workshop on Statistical Modeling, July 11-15, 1994. Exeter, U.K., (8 pages).

10. C. Czado, Y. You. (1994)
Inference for Binary Regression Models with Parametric Link: A Comparison.
Department of Mathematics Report, York University, (16 pages).

11. C. Czado. (1994)
Fitting Generalized Linear Models with Parametric Link in S.
Department of Mathematics Report, York University, (23 pages).

12. C. Czado. (1995)
Modeling Overdispersion in Binomial Regression: A Sampling Approach.
Department of Mathematics Report, York University, (24 pages).

13. M. Newton, C. Czado, R. Chappell. (1996)
Semiparametric Bayesian Inference for Binary Regression.
The Journal of the American Statistical Association, 91, 142-153.

14. C. Czado. (1996)
Bayesian Analysis of Multivariate Binary Response Data.
Proceedings of the 11 th International Workshop on Statistical Modelling. Orvieto, Italy, 15-19, 1996, 113-120.

15. C. Czado. (1996)
Multivariate Probit Analysis of Binary Time Series with Missing Responses.
Discussion Paper 23, SFB 386 *Diskrete Strukturen*, LMU München.

16. C. Czado. (1997)
On Selecting Parametric Link Transformation Families in Generalized Linear Models.
Statistical Planning and Inference, 61, 125-139.

17. A. Munk, C. Czado. (1998)
Nonparametric Validation of Similar Distributions and Assessment of Goodness of Fit
Journal of the Royal Statistical Society, Series B, 60, 223-241.

18. C. Czado, A. Munk. (1998)
Assessing the Similarity of Distributions - Finite Sample Performance of the Empirical Mallow Distance
Journal of Statistical Computation and Simulation, 60, 319-346.

19. C. Czado. (2000)
Multivariate Regression Analysis of Panel Data with Binary Outcomes applied to Unemployment Data.
Statistical Papers, 41, 281-304.

20. C. Czado, A. Munk. (2000)
Noncanonical Links in Generalized Linear Models - When is the Effort Justified.
Journal of Statistical Planning and Inference, 87, 317-345.

21. C. Czado, A. Munk. (2001)
Bootstrap Methods for the Nonparametric Assessment of Population Bioequivalence and Similarity of Distributions.
Journal of Statistical Computation and Simulation, 68, 243-280.

22. C. Czado. (2001)
Individual Migraine Risk Management using Binary State Space Mixed Models.
Discussion Paper 235, SFB 386.

23. C. Czado, F. Rudolph. (2002)
Application of Survival Analysis Methods to Long Term Care Insurance.
Insurance, Mathematics and Economics, 31, 395-413.

24. C. Czado, I. Sikora. (2002)
Quantifying Over-Dispersion Effects in Count Regression Data.
Discussion Paper 289, SFB 386.

25. C. Czado. (2004)
Einführung zu Markov Chain Monte Carlo Verfahren mit Anwendung auf Gesamtschadenmodelle.
Blätter der Deutschen Gesellschaft für Versicherungs- und Finanzmathematik, 26, 331-350.

26. C. Czado, S. Prokopenko, T. Zängler. (2004)
Räumliche Logit-Modelle der individuellen Verkehrsmittelwahl mit Berücksichtigung von Cluster Effekten.
Schriftenreihe der Deutschen Verkehrswissenschaflichen Gesellschaft e.V., DVWG, Band B280.

27. G. Müller, C. Czado. (2005)
An Autoregressive Ordered Probit Model with Application to High-Frequency Finance.
Journal of Computational and Graphical Statistics, 14, 2, 320-338.

28. C. Czado, A. Delwarde, M. Denuit. (2005)
Bayesian Poisson Log-Bilinear Mortality Projections.
Insurance: Mathematics and Economics, 36, 260-284.

29. F. Helms, C. Czado, S. Gschlößl. (2005)
Calculation of LTC Premiums based on Direct Estimates of Transition Probabilities.
ASTIN Bulletin, 35, 2, 455-469.

30. C. Czado , R. Högn. (2005)
Multi-Resolution Analysis of Long Time Series with Application to Finance
Technical Report, Center for Mathematical Sciences, Technische Universität München.

31. S. Haug and C. Czado. (2006)
Mixed Effect Models for Absolute Log-returns of Ultra High Frequency Data.
Applied Stochastic Models in Business and Industry, 22, (3), 243-267.

32. C. Czado, A. Raftery. (2006)
Choosing the Link Function and Accounting for Link Uncertainty in Generalized Linear Models using Bayes Factors.
Statistical Papers, 47, 419-442.

33. S. Haug and C. Czado. (2006)
A Fractionally Integrated ECOGARCH Process.
Discussion Paper 484, SFB 386.

34. G. Freitag, C. Czado, A. Munk. (2007)
A Nonparametric Test for Similarity of Marginals - with Applications to the Assessment of Population Bioequivalence.
Journal of Statistical Planning and Inference, 137, 697-711.

35. Czado, C. and A. Kolbe. (2007)
Empirical Quantification of the Volatility of Options at Transaction Level with Extended Count Regression Models.
Applied Stochastic Models in Business and Industry, 23, 1-21.

36. C. Czado, V. Erhardt, A. Min and S. Wagner. (2007)
Zero-inflated generalized Poisson models with Regression Effects on the Mean, Dispersion and Zero-inflation Level Applied to Patent Outsourcing Rates.
Statistical Modelling, 7, 125-153.

37. S. Gschlößl and C. Czado. (2007)
Spatial Modelling of Claim Frequency and Claim Size in Non-life Insurance.
Scandinavian Actuarial Journal, 107, 202-225.

38. S. Haug and C. Czado. (2007)
An Exponential Continuous Time GARCH Process.
Journal of Applied Probability, 44, 960-976.

39. C. Czado, S. Prokopenko. (2008)
Modelling Transport Mode Decisions using Hierarchical Logistic Regression Models with Spatial and Cluster Effects.
Statistical Modelling, 8, 315-345.

40. S. Gschlößl and C. Czado. (2008)
Does a Gibbs Sampler Approach to Spatial Poisson Regression Models Outperform a Single Site MH?
Computational Statistics and Data Analysis, 52, 4184-4202.

41. C. Czado and C. Pflüger. (2008)
Modeling Dependencies between Rating Categories and their Effects on Prediction in a Credit Risk Portfolio.
Applied Stochastic Models in Business and Industry. 24, 237-259.

42. S. Gschlößl and C. Czado. (2008)
Modelling Count Data with Overdispersion and Spatial Effects.
Statistical Papers, 49, 531-552.

43. C. Czado and P. X.-K. Song. (2008)
State Space Mixed Models for Longitudinal Observations with Binary and Binomial Responses.
Statistical Papers, 49, 691-714.

44. V. Erhardt and C. Czado. (2008)
A Method for Approximately Sampling High-dimensional Discrete Variables with a Prespecified Pearson Correlation.
INFORMS - Journal on Computing, In revision.

45. V. Erhardt and C. Czado. (2008)
Generalized Estimating Equations for Longitudinal Generalized Poisson Count Data with Regression Effects on the Mean and Dispersion Level.
Submitted.

46. K. Aas, C. Czado, A. Frigessi and H. Bakken. (2009)
Pair-copula constructions of multiple dependence.
Insurance, Mathematics and Economics, 44 (2), 182-198.

47. C. Czado, T. Gneiting and L. Held. (2009)
Predictive Model Assessment for Count Data
Biometrics, 65, 1254-1261.

48. G. Müller and C. Czado. (2009)
Stochastic Volatility Models for Ordinal Valued Time Series with Application to Finance.
Statistical Modelling 9, (1), 69-95.

49. C. Czado, H. Schabenberger and V. Erhardt. (2013)
Nonnested Model Selection for Spatial Count Regression Models with Application to Health Insurance.
Statistical Papers, `online first: 10.1007/s00362-012-0491-9`

50. A. Min, H. Holzmann and C. Czado. (2010)
Model Selection Strategies for Identifying Relevant Covariates in Homescedastic Linear Models.
Journal of Computational Statistics and Data Analysis. 54, 3194-3211.

51. A. Min and C. Czado (2010).
Bayesian Inference for Multivariate Copulas using Pair-copula Constructions.
Journal of Financial Econometrics. 8(4), 511-546.

52. R. Dakovic, C. Czado and D. Berg. (2010)
Bankruptcy Prediction in Norway: A Comparison Study.
Applied Economics Letters,1466-4291 .

53. C. Czado and S. Haug. (2010)
An ACD-ECOGARCH(1,1) model
Journal of Financial Econometrics. 8 (3) ,335-344

54. C. Czado, A. Heyn and G. Müller. (2011)
Modeling Individual Migraine Severity with Autoregressive Ordered Probit Models
Statistical Methods and Applications 20(1), 101-121.

55. C. Czado. (2010)
Pair-copula constructions of multivariate copulas
P. Jaworki, F. Durante, W. Härdle and W. Rychlik, (Ed.) *Workshop on Copula Theory and its Applications*, Springer, Dordrecht,93-109.

56. C. Czado, J. Pfettner, S. Gschlößl and F. Schiller. (2010)
Nonnested Model Comparison of GLM and GAM Count Regression Models for Life Insurance Data. Submitted.

57. C. Czado, G. Müller and T. Nguyen. (2010)
Ordinal- and Continuous-response SV Models for Price Changes: An Empirical Comparison.
In: Kneib, T., Tutz, G. (Eds.) *Statistical Modelling and Regression Structures - Festschrift in Honour of L. Fahrmeir.* Springer, Berlin. Physica Verlag, 301-320.

58. C. Varin and C. Czado. (2010)
A mixed autoregressive probit model for ordinal longitudinal data.
Biostatistics, 11, (1), 127-138.

59. A. Min and C. Czado. (2010)
Testing for Zero-modification in Count Regression Models.
Statistica Sinica, 20, (1), 323-341.

60. V. Erhardt, M. Bogdan and C. Czado (2010)
Locating Multiple Interactive Quantitative Trait Loci with Zeroinflated Generalized Poisson Regression.
Statistical Applications in Genetics and Molecular Biology. 9, Article 26.

61. M. Smith, A. Min, C. Almeida and C. Czado. (2010)
Modelling Longitudinal Data using a Pair-copula Decomposition of Serial Dependence
Journal of the American Statistcal Association. 105(492), 1467-1479.

62. A. Min and C. Czado (2012)
SCOMDY Models based on Pair-copula Constructions with Application to Exchange Rates.
Computational Statistics and Data Analysis `http://dx.doi.org/10.1016/j.csda.2012.08.003`.

63. M. Hofmann and C. Czado. (2010)
Assessing Value-at-risk using Joint Bayesian Inference of D-Vines with GARCH(1,1) Margins.
Submitted.

64. C. Czado, R. Kastenmeier E. Brechmann and A. Min (2012)
A mixed Copula Model for Insurance Claims and Claim Sizes,
Scandinavian Actuarial Journal. 278-305.

65. R. Zhang, C. Czado and A. Min. (2011)
Efficient Maximum Likelihood Estimation of Copula based Meta t-distributions
Computational Statistics and Data Analysis, 55, 1196-1214.

66. C. Bernard and C. Czado (2012)
Multivariate Option Pricing using Copulae.
Applied Stochastic Models in Business and Industry. `online first : 12 JUL 2012, DOI: 10.1002/asmb.1934`

67. V. Erhardt and C. Czado. (2012)
Modeling Dependent Claim Totals including Zero Claims in Private Health Care Insurance
Scandinavian Actuarial Journal, (2), 106-129.

68. E. Brechmann, C. Czado and K. Aas (2012)
Truncated regular vines in high dimensions with application to financial data
Canadian Journal of Statistics. 40 (1), 68-85. .

69. C. Czado, U. Schepsmeier and A. Min (2012)
Maximum likelihood estimation of mixed C-vines with application to exchange rates.
Statistical Modelling, 12, 229-255.

70. C. Czado and T. Schmidt. (2011)
Mathematische Statistik.
Springer Verlag, Berlin. ISBN 978-3-642-17260-1

71. E. Brechmann, C. Czado and P. Ng (2011)
Modeling Bank Branch Deposits: A Case Study using Linear Mixed Models.
International Journal of Statistics and Management Systems, 6, 22-46.

72. C. Czado, F. Gärtner and A. Min. (2011)
Analysis of Australian Electricity Loads using Joint Bayesian Inference of D-Vines with Autoregressive Margins.
In Kurowicka, D., Joe. H. (Ed) *Dependence Modeling - Vine Copula Handbook*, 265-280, World Scientific, London.

73. C. Czado and A. Min. (2011)
Bayesian Inference for D-vines: Estimation and Model Selection.
In Kurowicka, D., Joe. H. (Ed) *Dependence Modeling - Vine Copula Handbook*, 249-264, World Scientific, London.

74. V. Erhardt and C. Czado. (2011)
Sampling Count Variables with Specified Pearson Correlation - a Comparison between a Naive and a C-vine Sampling Approach
In: Kurowicka, D., Joe, H. (Ed.) *Dependence Modeling - Vine Copula Handbook*, 73-88, World Scientific, London.

75. A. Min and C. Czado. (2011)
Bayesian model Selection for Multivariate Copulas using Pair-copula Constructions.
Canadian Journal of Statistics. 39(2),239-258.

76. R. Dakovic and C. Czado. (2011)
Comparing Point and Interval Estimates in the Bivariate t-copula Model with Application to Financial Data
Statistical Papers. 52,709-731.

77. C. Almeida and C. Czado. (2012)
Efficient Bayesian Inference for Stochastic Time-varying Copula Models.
Computational Statistics and Data Analysis. 56, 1511-1527.

78. E.C. Brechmann and C. Czado (2013)
Risk Management with High-Dimensional Vine Copulas: An Analysis of the Euro Stoxx 50. Statistics & Risk Modeling, to appear.

79. A. Bauer, C. Czado and T. Klein (2012)
Pair-copula constructions for non-Gaussian DAG models
Canadian Journal of Statistics. 40, 86-109.

80. A. Panagiotelis, C. Czado and H. Joe (2012)
Pair copula constructions for multivariate discrete data
Journal of the American Statistical Association, 107 1063-1072.

81. C. Czado and E.C. Brechmann (2011)
Bayesian Risk Analysis
in Klppelberg, C.; Straub, D.; Welpe, I.: Risk - An interdisciplinary introduction (submitted)

82. J. Stöber and C. Czado (2011)
Pair copula constructions. in Scherer, M. and Mai, J.-F. (2011)
Simulating Copulas: Stochastic Models, Sampling Algorithms, and Applications
World Scientific Publishing, Singapore, 187-232

83. A. Bauer and C. Czado (2012).
Pair-copula Bayesian networks. submitted.

84. J. Stöber and C. Czado (2013)
Regime switches in the dependence structure of multidimensional financial data Original Research Article *Computational Statistics & Data Analysis*
`http://dx.doi.org/10.1016/j.csda.2013.04.002`.

85. C. Bernard, E.C. Brechmann and C. Czado (2012)
Statistical assessments of systemic risk measures in J-P. Fouque and J. Langsam (2012) The Handbook of Systemic Risk, Cambridge University Press, 2012

86. J. Dißmann, E.C. Brechmann, C. Czado and D. Kurowicka (2013)
Selecting and estimating regular vine copulae and application to financial returns. Computational Statistics and Data Analysis, 59, 52-69.

87. R. Zhang, C. Czado and K. Siegloch (2013)
A Bayesian linear model for the high dimensional inverse problem of seismic tomography
Annals of Applied Statistics, 7 (2), 1111-1138.

88. E.C. Brechmann and C. Czado (2012), COPAR - Multivariate Time Series Modeling Using the COPula AutoRegressive Model. Submitted for publication.

89. J. Stöber, H. Joe and C. Czado (2013)
Simplified Pair Copula Constructions - Limits and Extensions
Journal of Multivariate Analysis, 119, 101-118.

90. D. Schmidl, C. Czado, S. Hug and F.J. Theiss (2013)
A vine copula based adaptive MCMC sampler for efficient inference of dynamical systems. Bayesian Analysis, 8, 1-42. (with discussion and rejoinder)

91. C. Almeida, C. Czado and H. Manner (2011)
Modelling high dimensional time-varying dependence using D-vine SCAR models submitted.

92. C. Czado, S. Jeske and M. Hofmann (2013)
Selection strategies for regular vine copulae
Journal de la Societe Francaise de Statistique, 154 (1), 174-191.

93. N. Krämer, E.C. Brechmann, D. Silvestrini, C. Czado (2012)
Total loss estimation using copula-based regression models
Insurance: Mathematics and Economics, `Available online 16 September 2013`

94. C. Czado, E.C. Brechmann, L. Gruber (2012)
Selection of vine copulas
In P. Jaworski, F. Durante and W. K. Hrdle (Eds.), Copulae in Mathematical and Quantitative Finance, Springer, 17-37.

95. L. Gruber and C. Czado (2013)
Sequential Bayesian Model Selection of Regular Vine Copulas submitted.

96. E.C. Brechmann, C. Czado and S. Paterlini (2013)
Flexible Dependence Modeling of Operational Risk Losses and Its Impact on Total Capital Requirements. In revision.

97. E.C. Brechmann, K. Hendrich and C. Czado (2013)
Conditional Copula Simulation for Systemic Risk Stress Testing. To appear in Insurance: Mathematics and Economics.

98. Stöber, J., C. Czado, H. Hong, and P. Ghosh (2012)
Interrelation among chronic diseases in the elderly: Longitudinal patterns identified by copula design for mixed responses. submitted.

99. Zhang, R., Czado, C. and Sigloch, K. (2013)
Bayesian spatial modeling for high-dimensional seismic inverse problems. Submitted to Royal Journal of Statistical Society: Series C

100. Gruber, L. and Czado, C. (2013)
Bayesian model selection of regular vine copulas. In preparation.

101. C. Czado, N. Krämer and E.C. Brechmann (2011)
Generalized linear models with application
Book project in preparation.

Conference Presentations last 5 years

2014: C. Czado
Keynote speaker at the International Workshop on High-Dimensional
Dependence and Copulas: Theory, Modeling, and Applications January 3-5, 2014, Beijing, China.
C. Czado
Vines: Building multivariate copulas using pair copula constructions. Invited talk at the 42th
Annual Meeting of the Statistical Society of Canada, May 25–28, 2014, Toronto, Canada.
C. Czado
Invited talk at the 2014 Joint Statistical Meetings, August 2 - 7, 2014, Boston, USA

2013: C. Czado
Vine copulas and their applications to financial data. Invited talk at the
Actuarial and Financial Mathematics Conference, Feb. 7-8, 2013, Brussels, Belgium
C. Czado and J. Stöber
Pair copula constructions for mixed outcomes with application to comorbidity among the elderly
Contributed talk at the DAGStat 2013, March 18-22, 2013, Freiburg
C. Czado and Aas, K.
Pair-copula constructions – even more flexible than copulas
Video: `http://videos.birs.ca/2013/13w5146/201305201301-Aas.mp4`
Invited talk at the workshop “Non-Gaussian Multivariate Statistical Models
and their Applications” Banff International Research Station for Mathematical
Innovation and Discovery, May 19-24, 2013, Banff, Canada
C. Czado
Vine copulas and their applications. Invited talk at the Workshop Model Selection,
Nonparametrics and Dependence Modeling July 8 9, 2013, Ensai, Rennes, France
C. Czado
Dependence modeling using pair copula constructions. Invited talk at the Statistical Science
in Society: A conference to celebrate the International Year of Statistics and the launch of the
Canadian Statistical Sciences Institute July 31 - August 2, 2013, Waterloo, Canada
C. Czado, E.C. Brechmann and S. Paterlini
Modelling the total loss distribution based on dependent operational risk frequency counts
Invited talk at the 59th World Statistics Congress, August 25-30, 2013, Hong Kong, China
C. Czado
Dependence Modeling Using Pair Copula Constructions. Invited talk at the Ninth ICSA
International Conference: Challenges of Statistical Methods for Interdisciplinary Research and
Big Data, 20-23 December, 2013 Hong Kong Baptist University

2012: C. Czado
Pair Copula Constructions of Multivariate Copulas: Estimation and ModelSelection.
10th German Probability and Statistics Days 2012, March 6-9, 2012, Mainz, Germany
C. Czado
Vine copulas and their applications. Invited talk at Workshop
Risk and Dependence in Economics and Finance, April 13, 2012, Bolzano, Italy
C. Czado
Model selection for regular vine models with applications. Talk at
Copulae in mathematical and quantitative finance, 10-11 July 2012, Cracow, Poland
C. Czado and E.C. Brechmann.
Short Course “Copulae Calibration in Theory and Practise, 9 July 2012, Cracow, Poland
C. Czado
Introduction to copulas with applications. Invited talk at the
57. Jahrestagung der Deutschen Gesellschaft für Medizinische Informatik,
Biometrie und Epidemiologie e.V., Sept. 16-21, 2012, Braunschweig
C. Czado
The world of vines. Invited talk at the 20 th Meeting of the Belgium
Statistical Society, Oct 25-26, 2012, Liege, Belgium

2011: C. Czado
The world of vines, 4th Workshop on Vine Copula Distributions and Applications, May 11-12, 2011, Munich
C. Czado
Bayesian inference for copula based GARCH models. Poster presented at the 26th International Workshop on Statistical Modelling, July 11-15, 2011, Valencia, Spain
C. Czado
Pair copula constructions of multivariate copulas and their applications
Topic contributed talk at JSM 2011, July 30-August4, 2011, Miami Beach, U.S.A
C. Czado
Bayesian analysis of vine copula models with financial applications
Invited talk at the European Seminar on Bayesian Econometrics
Nov. 4-5, 2011, Brussels, Belgium
C. Czado
Vine copulas with application to financial data
invited talk 4th International Conference of the ERCIM WG on COMPUTING & STATISTICS (ERCIM'11) 17-19 December 2011, Senate House, University of London, UK

2010: C. Czado
Statistical Models and Estimation Methods for Ordinal Longitudinal Data
Invited talk at JSM 2010, July 31 - Aug. 5, 2010, Vancouver, Canada
C. Czado
Pair Copula Constructions and Applications to Financial Data
Invited talk at the 23rd Nordic Conference on Mathematical Statistics, 14-17 June 2010, Voss, Norway

Talks

I have given talks at numerous German and international universities.

Extended Research Visits

Sept. 20 - Oct. 1, 2010	C.A.S.E. Centre for Applied Statistics and Economics, Humboldt-Universität, Berlin invited by Prof. O. Okhrin
Apr. 26 - May 12, 2010	Norwegian Computing Center, Oslo, Norway invited by Prof. A. Frigessi
July 10 - 30, 2010	Department of Statistics University of British Columbia, Vancouver, Canada invited by Prof. Harry Joe
Sept. 1 - 9, 2007	Department of Econometrics and Business Statistics University of Sydney, Sydney, Australia invited by Prof. R. Gerlach
Sept. 10 - 25, 2007	School of Finance and Applied Statistics Australian National University, Canberra, Australia invited by Prof. R. Maller
Mar. 20 - Apr. 20, 2006	Department of Statistics Washington State University, Seattle, U.S.A. invited by Prof. T. Gneiting
Feb. 20 - Mar. 19, 2006	Department of Statistics and Acturial Science University of Waterloo, Waterloo, Canada invited by Prof. P. X-K. Song
Oct. 10 - Oct. 24, 2005	Department of Mathematical Sciences Norwegian University of Science and Technology, Trondheim, Norway invited by Prof. H. Rue
Aug. 25 - Sep. 26, 2005	Norwegian Computing Center, Oslo, Norway invited by Prof. A. Frigessi
Sept. 27 - Oct. 8, 2004	Centre for Statistics, Georg August-Universität, Göttingen invited by Prof. Dr. A. Munk
Apr. 2001	Department of Mathematics and Statistics York University, Toronto, Canada invited by Prof. P. X-K. Song
May - Aug. 2001	Department of Statistics Washington State University, Seattle, U.S.A. invited by Prof. A. E. Raftery
June - Aug. 1995	Institut für Mathematische Stochastik Georg-August-Universität, Göttingen invited by Prof. Dr. M. Denker
Sep. 1995 - Apr. 1996	Institut für Statistik Ludwig-Maximillians-Universität, München invited by Prof. Dr. L. Fahrmeir
May - Aug. 1996	Institut für Quantitative Methoden Technische Universität, Berlin invited by Prof. Dr. G. Tutz

Research Support

NSERC	=	Natural Sciences and Engineering Research Council of Canada
DFG	=	German Research Foundation
SFB	=	Special Research Unit sponsored by the DFG
BMBF	=	German Ministry for Education and Research
IGGSE	=	International Graduate School for Science and Engineering, TUM

Personal

2010-2013	Allianz Ph. D. Stipends	2 50% stipends for 3.5 years
2008-2010	DFG Project "Statistical Inference for high dimensional Dependence Models using Pair Copulas"	Salary for 1 research position
2003-2006	DFG Project "Statistical Methods of Model Choice for Regression"	Salary for 1 research position
1996-2000	NSERC Individual Research Grant (4 years)	CAD $13.400 (each year)
1995	Sabbatical Leave Fellowship	CAD $3000
1993-1995	NSERC Individual Research Grant (3 years)	CAD $8000 (each year)
1992-1993	Academic Initiative Fund Grant	CAD $4000
1991	President's NSERC Grant	CAD $2891
1990-1992	NSERC Operating Grant (3 years)	CAD $12.500 (each year)
1989	President's NSERC Grant	CAD $1500
1989	Faculty of Arts Minor Research Grant York University	CAD $1464

Joint

2013-2016	IGGSE Focus Area Water "Drought modeling and monitoring by novel statistical and analytical methods" (Project coordinator: A. Menzel, TUM)	1 Ph.D. stipend
2010-2013	BMBF "SIMDATA-NL: Nichtlineare Charakterisierung und FEM-Simulationsergebnissen für Autobauteil und Crash-Tests" (Project coordinator: M. Griebel, Bonn)	1 Ph.D. stipend
2008-2012	Forschungsverbund "Munich Centre of Advanced Computing" (Principal Investigator: H.J. Bungartz)	1 Ph.D stipend
2003	SFB 386 Project A6 (3 years) (joint with C. Klüppelberg)	Euro 60.000 (eac
2002	BMBF "Initiative Notebook-University" "Interactive Statistic Education with SPlus and SAS"	Euro 60.000
2000	SFB 386 Project A6 (3 years) (joint with C. Klüppelberg)	Euro 113.312 (ea
1995	NSERC Equipment Grant (Principal Investigator: C. Czado)	CAD $32.521
1993	NSERC Infrastructure Grant (Principal Investigator: J. Fox)	CAD $25.000
1992	NSERC Equipment Grant (Principal Investigator: S. Fienberg)	CAD $44.705
1991-1994	NSERC Infrastructure Grant (Principal Investigator: S. Kochman)	CAD $25.000 (ea
1990-1993	NSERC Infrastructure Grant (Principal Investigator: J. Fox)	CAD $25.000 (ea

Current Research Interests

- Multivariate Copulas and their Inference with Applications (web: `vine-copula.org`)
- Statistical Models for Ordinal Valued Regression Data and Applications
- Statistical Models for High Frequency Financial Data
- Binary Spatial Regression Models
- State Space Models for Dependent Multivariate Responses
- Bayesian Analysis Using Monte Carlo Markov Chain Methods
- Model Selection
- Model Validation and Interval Hypothesis Testing

Contributions to the Profession

Advisory Board	*Statistical Papers*
Referee for	*The Journal of the American Statistical Society,*
	The Canadian Journal of Statistics,
	Metrika
	The Australian Journal of Statistics.
	The Journal of Statistical Computation and Simulation,
	The American Statistician,
	Statistical Papers.
	Journal of Multivariate Analysis
	Journal of Computational and Graphical Statistics
	Biometrical Journal
	Quantitative Finance
Dec. 1995, 1993, 1992	Reviewed research grant applications for NSERC
1989-1994	Member of the Institute of Mathematical Statistics
Since 1991	Member of the American Statistical Society

Statistical Consulting

Solid Experience in statistical consulting for researchers in economics, psychology and sociology as *Associate Coordinator* of the *Statistical Consulting Service* of the *Institute of Social Research*, York University

Graduiertenkolleg (Graduate Education)

Senior member of the Graduiertenkolleg "Applied Algorithmic Mathematic" at the Zentrum Mathematik, Technische Universität München. Supervision of the Ph.D. fellowship students S. Prokopenko (Nov. 2000 - June 2004) and S. Gschlößl (Sep. 2002 - Jan. 2006)

Teaching

Undergraduate

Jan. 1989 - May 1989
Mathematics for Biologists, McGill University, Montreal, Quebec
Introduction to Statistics, McGill University, Montreal, Quebec

Aug. - Dec. 1989, Aug. - Dec. 1990
Elementary Statistics I, York University (MATH 2560.03)

Jan. - May 1990, Jan. - May 1991
Elementary Statistics II, York University (MATH 2570.03)

Aug. - Dec. 1991
Regression Analysis, York University (MATH 3330.03)

Jan. - May 1992; Jan. - May 1993
Analysis of Variance, York University (MATH 3230.03)

Aug. - Dec. 1992, Aug. - Dec. 1993, Aug. - Dec. 1994, Aug. - Dec. 1996, Aug. - Dec. 1997
Classical Regression Analysis, York University (MATH 3033.03)

Jan. - May 1993, Jan. - May 1994, Jan. - May 1995, Jan. - May 1998
Modern Regression Analysis York University (MATH 3034.03)

Jan. - May 1998
Bayesian Statistics, York University (MATH 4130/MATH 6639B)

Nov. 1998 - Feb. 1999
Statistik für Naturwissenschaftler und Ingenieure, Technische Universität München

Nov. 1999 - Feb. 2000; Nov. 2000 - Feb. 2001; Oct. 2004 - Feb. 2005
Einführung in die Wahrscheinlichkeitstheorie und Statistik (Stochastik 1),
Technische Universität München

Apr. 2001 - July 2001
Lineare Modelle mit Anwendungen, Technische Universität München

Apr. - July 2007, Apr. - July 2008
Lineare Modelle mit Anwendungen in Wirtschaft und Finanz,
Technische Universität München

Apr. - July 2009, Apr. - July 2012
Statistik: Grundlagen,
Technische Universität München

Graduate

Aug. - Dec. 89, Aug. - Dec. 90, Aug. - Dec. 93, Aug. - Dec. 94, Aug. - Dec. 96
Linear Models and Regression, York University (MATH 6621.03)

Jan. - May 1990, Jan. - May 1991, Jan. - May 1997
Statistical Techniques, York University (MATH 6622.03)

Aug. 1991 - May 1992
Mathematical Statistics, York University (MATH 6620.06)

Apr. - July 1999, Apr. - July 2000, Apr. - July 2002, Apr. - July 2003, Apr. - July 2004, Apr. - July 2006
Mathematische Statistik (Stochastik 4), Technische Universität München

Oct. 2001 - Feb. 2002, Oct. 2003 - Feb. 2004, Oct. 2006 - Feb. 2007, Oct. 2007 - Feb. 2008, Oct. 2009 - Feb. 2010, Oct. 2010 - Feb. 2011, Oct. 2011- Feb. 2012, Oct. 2012 -Feb. 2013
Generalized Linear Models, Technische Universität München

Oct. 2002 - Feb. 2003, Apr. - July 2005, Apr.- July, 2011, Apr. - July 2012
Computational Statistics, Technische Universität München

Apr. - July 2007, Apr. - July 2008, Apr. - July 2009
Stochastic Simulation and Algorithms with Applications, Technische Universität München

Supervision at the Technische Universität München

Habilitation

PD. Dr. Aleksey Min	Dependence Modelling: From regressions to copulas (January 2011)
Dr. Nicole Krämer	Copula based data mining (since July 2011)

Post Doctoral Students

Dr. Rada Dakovic	(Oct. 2006 - Oct. 2008)
Dr. Carlos Almeida	(Sept. 2008 - Aug. 2011)
Dr. Mathias Hofmann	(Nov. 2008 - Dec. 2011)
Dr. A. Panagiotelis	(Humboldt Postdoctoral Stipend, Aug. 2009- July 2011)

Ph.D. Students

Gernot Müller	Regression Models for Ordinal Valued Time Series: Estimation and Applications in Finance (Oct. 2000 - July 2004))
Sergij Prokopenko	Hierarchical Binary Spatial Regression Models with Cluster Effects (Nov. 2000 - June 2004)
Ralf Högn	Multiresolution Analysis of Long Time Series with Applications to Finance (Oct. 2001 - June 2005)
Susanne Gschlößl	Hierarchical Bayesian spatial regression models with applications to non-life insurance (Sept. 2002 - Feb. 2006)
Stephan Haug	Exponential COGARCH and other continuous time models (Feb. 2003 - Feb. 2007)
Vinzenz Erhardt	Modelling differnt dependence structures involving count data with applications to insurance, economics and genetics (Sept. 2006- June 2010)
Alex Bauer	Pair-copula constructions for non-Gaussian Bayesian networks (Feb. 2009 - Feb. 2013)

Jakob Stöber	Regular Vine Copulas with the simplifying assumption, time-variation, and mixed discrete and continuous margins (May 2010 - June 2013, TopMath student)
Ran Zhang	(since May 2009)
Eike Brechmann	(since December 2010)
Ulf Schepsmeier	(since Decmeber 2010)
Lutz Gruber	(since October 2011)
Tobias Erhardt	(since October 2013)

Diploma Theses

I have supervised **62 Diplom/Master theses** and I currently supervise 4 Masters/Diploma students. The following students have received prizes for their thesis.

F. Rudolph	Anwendungen der Überlebenszeitanalyse in der Pflegeversicherung 1. Prize at SCOR Preis für Aktuarwissenschaften 2000
F. Helms	Estimating LTC Premiums using GEE's for Pseudo-Values 2. Prize at SCOR Preis für Aktuarwissenschaften 2004
R. Kastenmeier	Joint Regression Analysis of Insurance Claims and Claim Sizes 3. Prize at SCOR Preis für Aktuarwissenschaften 2008

Curriculum Development

1991 Developed honour's stream lectures in regression [MATH3033.03 and MATH3034.03]

2003 Development of web pages for students (Introduction to the statistical programs S-Plus and R, Time series analysis with S-Plus, Modern Methods for Regression, S-Plus GARCH Documentation). Web pages (in German) can be found at http://www-m4.ma.tum.de/software/

2005 Development of lecture slides on generalized linear models in English, can be found at http://www-m4.ma.tum.de/software/

2005 Development of lectures notes for "Computational Statistics".

Service at the Technischen Universität München

Oct. 2008- Nov. 2011
Managing director (Human Resources) at the Faculty Mathematik, Technische Universität München

May 2008 - May 2009, Nov. 1998 - May 2007
Women's Representative at the Faculty Mathematik, Technische Universität München

Since March 2007
Development and Organisation of Faculty Gender Initiative Program **WOMEN FOR MATH SCIENCE** supported by the **Execellence Initiative "Unternehmerische Hochschule"** and the Faculty of Mathematics of the Technischen Universität München (2008-2010 Euro 45,000, 2011 Euro 16,000)

May 2007 - Apr. 2008, Since May 2009
Vice Women's Representative at the Faculty Mathematik, Technische Universität München

Apr. 1999 - Oct. 2002
Member of Examination Committee of the Faculty Mathematik

Oct. 2002 - Sept. 2009
Vize head of Examination Committee of the Faculty Mathematik

Dec. 1999 - Jan. 2002
Head of the Selection Committee for the John-von-Neumann Professorship

Since Oct. 2008, Jan. 2002 - March 2005, since Oct. 2008
Member of the Executive Committee of the Faculty Mathematik

Extra University/Community Service and Conference Organisation

March 2002 - March 2006
Elected Member of the Executive Committee of the Stochastikgruppe of the German Mathematical Society

Dec. 2002
Member of the Program Committee of the SFB Workshop *Stochastic volatility and risk management - temporal and spatial dependence* (Dec. 4-6, 2002)

Nov. 2004
Organization of the SFB 386 Workshop *Spatial and Spatial Temporal and Statistics* (Nov. 22, 2004)

Oct. 2005
Member of the Program Committee of the SFB 386 Workshop *Model hoice and Validation* (Oct. 6-8, 2005)

Oct. 2006
Member of the Program Committee of the SFB 386 Workshop *Statistical Modelling of Complex Systems* (Oct. 12-14, 2006)

June 2010
Organisation of the Section "Statistics in Finance" at the 23rd Nordic Conference on Mathematical Statistics, Voss, Norway

May-June 2011
Invitation and Organisation of visit to Munich of the John von Neumann Professor Harry Joe, Vancouver, Canada

May 11/12, 2011
Organisation of the 4th Workshop on Vine Copula Distributions and Applications Munich, /www-m4.ma.tum.de/lect-conf/vinesworkshop/

July 10-11, 2012
Member of the Scientic Programm Committee for the workshop: Copulae in Mathematical and Quantitative Finance Krakow - Przegorzaly

July 9, 2012
Short course in Krakw - Przegorzaly: "Vine copulae; Simulation; Estimation methods; Model selection; Truncation; Vine sector models" together with E. Brechmann.

July 30 to August 3, 2012
Co-organizer of the ISAM - TopMath Summer School on "Dependence Modeling" at the Technische Universität München.

Oct 2012 - Dec. 2014
Host for Humboldt Experienced Researcher Prof. Carol Bernard, University of Waterloo, Canada.

Jan. 2-5, 2014
Co-organizer of the workshop "High-Dimensional Copulas: Theory, Modeling, and Applications" at the Central University of Finance and Economics (CUFE), Beijing, China

October 2013