Curriculum Vitae: Gesine Reinert

1. Personal Details

Date of Birth: 8th August 1963

Nationality: German

Contact: Department of Statistics,
University of Oxford
Tel +44 (0) 1865 281541
Email: reinert@stats.ox.ac.uk

2. Research Experience and Interests

Much of my current research is driven by the probabilistic and statistical analysis of networks, with special emphasis in biology. While centred at the interface between applied probability and theoretical statistics, my research reaches out towards theoretical probability on the one hand and applied statistics on the other hand.

3. Positions and Employment

Salaried:

Since 9/2014 Research Professor, Department of Statistics, University of Oxford

10/2000 -8/2014 University Lecturer, Department of Statistics and Keble College, University of Oxford; awarded the title of *Professor of Statistics* in 2004

10/1998 - 9/2000 Senior Research Fellow, King's College, Cambridge

7/1996 - 9/1998 Adjunct Assistant Professor, Department of Mathematics, UCLA, Los Angeles

9/1994 - 7/1996 Lecturer, Department of Mathematics, USC, Los Angeles

Honorary:

since 10/2012 Fellow, Oxford Martin School

since 1/1998 Research Assistant Professor, Department of Mathematics, USC, Los Angeles

Visiting Professorships:

3-5/2011 Institute for Mathematical Sciences, National University of Singapore

8/2003 Institute for Mathematical Sciences, National University of Singapore

7/2003 University of Lyon, France

12/1998 INRA, Jouy-en-Josas, France

4. Education

1994 PhD, Applied Mathematics, University of Zürich, Switzerland;

Supervisor: Prof. A.D. Barbour

1989 Diploma in Mathematics, University of Göttingen, Germany (Distinction)

5. Research grants

Ongoing Research Support

2015-2018 Co-PI, NSF grant 1518001: *Inference of Markovian Properties of Molecular Sequences Using Shotgun Reads and Applications*. US $202,929.

2015 – 2017 Co-PI, ARC Discovery Project Grant, project title: Random Discrete Structures: Approximations and Applications. Aus $591,800.00

2013-2016 EPSRC grant on *Network Comparison*; funding around £500,000

2012-2015 Oxford Martin Programme on *Resource Stewardship*, total funding £1.5M

2012- 2015 Partner Investigator, Australian Research Council Discovery Project, with Konstantin Borovkov, Andrew Barbour, Philip Pollett, Alexander Novikov, Aihua Xia, and Malwina Luczak: *Random Network Models with Applications in Biology*, total AUS $300,000

Completed Research Support

2012-2013 Oxford-EPSRC funding to support research scientists with caring responsibilities, £3,877

2012 EPSRC funding to support Women in Science, £7,798

2007 – 2012 BBSRC GRANT INTEGRATIVE SYSTEMS; CO-PI, FUNDING AROUND £232,000

2009 – 2010 Oxford Centre for Integrative Systems Biology grant, *Predicting specificity-determining sites in protein: protein* interactions, with J. Armitage and C. Deane, Oxford; project funding for 1 postdoctoral RA

2008 - 2009 Oxford Centre for Integrative Systems Biology grant *Localization of Proteins in Chemotaxis Pathways* with J. Armitage and C. Deane, Oxford; project funding for 2 postdoctoral RAs

2005 - 2008 MMCOMNET grant *Measuring and Modelling Complex Networks across Domains*. Leader of Work Package 6; total funding around €1.5M

2001 - 2004 EPSRC grant *Bounds on distances in distribution using Stein's method*, £63,000

2000 - 2003 ARC (British Council Germany and DAAD) grant *Stein's method for models in statistical mechanics*; with P. Eichelsbacher, Bochum, £4,095

1995 - 1997 NSF grant DMS-950575 *Stein's method and the zero bias transformation*; with Larry Goldstein, USC, about $70,000

6. Honours and Awards

May 1, 2015: elected Fellow of the IMS

7. Supervisions

Post-doctoral Researchers

Francois Collet (joint with Peter Hedstrom) 10/2005 -8/2007

Adrian Röllin 4/2007 – 3/2008

Pao-Yang Chen (joint with Charlotte Deane and Judy Armitage) 2/2008 – 11/2008

Kaisheng Lin 10/2008 – 9/2009

Rebecca Hamer (joint with Charlotte Deane and Judy Armitage) 1/2008

Robert Gaunt since 4/2013

Waqar Ali since 10/2013

Chris Farmer since 10/2013

Doctoral Students

Completed:

Alistair Pickett (2004) *Rates of convergence of Chi-Square approximations via Stein's Method*

Nathanael Benjamin (2005) *Occurrences of exceedances in a finite perpetuity*

Kim-Huat Lim (2007) *Modelling epidemics via empirical measures and random graphs*

Pao-Yang Chen (2008) (joint with Charlotte Deane) *Prediction and validation of protein interaction networks*

Kaisheng Lin (2008) *Motif counts, clustering coefficients, and vertex degrees in models of random networks*

Elizabeth Ford (2010) *Barabasi-Albert random graphs, the Yule-Simon distribution and bounds for approximation through Stein's method*

Tiago Rito (2012) (joint with Charlotte Deane) *Modelling and comparing protein interaction networks using subgraph counts*

Mireille Gomes (2013) (joint with Charlotte Deane) *Role of Mutual Information for predicting contact residues in proteins*

Robert Gaunt (2013) *Rates of convergence of Variance-Gamma approximations via Stein's method*

Andreas Anastasiou (2016) *Normal approximation of maximum likelihood estimators using Stein's method*

Current:

Andrew Elliott (joint with Felix Reed-Tsochas and e-Therapeutics) *A systematic study of Parkinson's disease network construction through sub-sampling and seed lists*

Joyce Klu (joint with Chris Farmer) *Social Networks, Decision Making and Natural Resource Governance*

Malte Lucken (joint with Charlotte Deane and UCB) *Application of Multi-Resolution Partitioning of Interaction Networks to the Study of Complex Disease*

Luis Ospina (joint with Charlotte Deane) *Modelling of Ego-Networks from Protein-Protein Interaction Networks*

Mikolaj Kasprzak *Stein's Method for functional approximation*

Project students

DTC (Doctoral Training Centre) students

Lyuba Bozhilova (2016, joint with Charlotte Deane and e-Therapeutics) *Application of multi-resolution partitioning of interaction networks to the study of complex disease*

Malte Lucken (2013, joint with Charlotte Deane and UCB) *Application of multi-resolution partitioning of interaction networks to the study of complex disease*

Thaddeus Aid (2012, joint with Steve Kelly, Plant Sciences) *Alignment-free methods for phylogenetic inference*

Tiago Rito (2009, joint with Charlotte Deane) *Test statistics for biological network comparison*

M.Sc. Students

Zheng Choo (joint with Dieter Jaksch, Physics; MSc by Research, 2014) *Probabilistic Analysis of the Prime Factorisation of Walks*

Yining Cai (2014) (joint with Florian Habermacher, Aurora Energy Research) *Average Cold Spell Electricity Demand Modelling*

Xiang Ying Lee (2014) An Exploratory Study On Visualization Layouts and Community Detection Methods

Jolyon Faria (2013) *Predicting Protein Function using Protein Interaction Networks: Extensions of the Frequency Based Method*

Shuang Tian (2013) *Comparison of Trade Networks*

Tadas Rudzevicius (2011, joint with Trevor Maynard, Lloyd's) *Statistical Analysis of Exceedance Probabilites*

Narinder Singh Sahota (2009) *Stock Index Co-Movement Analysis*

Gurjinder Singh Mohan (2009, with EcoVeritas) *Sampling Aspects of Packaging Waste Obligation Calculation*

Dong Zhang (2009) *The Shortest Path Length in Small-World Networks*

Shailendra Singh (2008) *Implementation and Analysis of the Hall and Jewson Hurricane Landfall Model*

Katharina Schwoch (2008*) Analysing Network Statistics: Spectral Analysis of Networks*

Giancarlo D'Elia (2008, joint with Trevor Maynard, Lloyd's) *Devising a Temporal and Spatial Model for Predicting Wildfires*

Caroline Durrant (2007) *Haplotype Clustering Methods: Application to Disease Mapping*

Yi Li (2007) *Analysis of Finnish Election Data*

Anita Die Shao (2007, joint with Jonathan Broughton) *Horse Betting to Assess Subjective Probability*

Sally Lei Sun (2007, joint with Trevor Maynard, Lloyd's) *Analysis of Hurricane Landfalls in the North Atlantic Basin*

Winnie Qiumin Luo (2006, joint with Trevor Maynard, Lloyd's) *Analysis of Catastrophe Data*

John Berry (2005, joint with Trevor Maynard, Lloyd's) *Using Lloyd's Realistic Disaster Scenarios to Monitor Trends and to Predict Performance*

Ravi Kalia (2005) *Social Network Analysis*

Kohei Marumo (2003) *Parameter estimation in stochastic epidemics*

Hui Qiu (2003, joint with Keith Briggs, BTexact) *Modelling of number-word evolution*

Christian van Zijl (2002) *Analysis of multiple financial time series with special emphasis on volatility models*

Nathanael Benjamin (2001) *Analysis of exchange rate time series with particular emphasis on Value-at-risk*

Alastair Pickett (2001, joint with Keith Briggs, BTexact) *A statistical characterization of internet round-trip times*

4th year project students

Wen Wen (2016) Comparison of World Trade Networks

Kieran Silsby (2015) Community detection for networks without and with Random Forests

Sizhu Yang (2015) The rate of convergence of Chi-square statistics using Stein's method (joint with Robert Gaunt)

Rebecca Walton (2014) Comparing directed, bipartite graphs via subgraph counts, with application to metabolic networks

Samiha Ismail (2013, joint with Gao Yu, Lloyd's) *Modelling and Measuring Dependence between Lloyd's Syndicates*

Irving Shark (2013) *Role Classification of the World Trade Flow Network*

Aqil Datoo (2010) *Time Series Analysis and the Lee-Carter Model in Demography*

Adam Harper (2008, joint with Roger Heath-Brown) *The Erdös-Kac Theorem with a Stein's Method Viewpoint*

Stephen Woodcock (2003) *Small World Networks*

8. University lectures

Statistical Inference for Networks (DTC course)

Markov Chain Monte Carlo and Applied Bayesian Statistics (M.Sc. course)

Statistical Theory (M.Sc. course)

Stochastic Simulation (M.Sc. course)

Time Series (M.Sc. course)

Probability and Statistics for Networks (4th year course)

3rd year Applied Statistics

3rd year Probability and Statistics (at USC and UCLA)

2nd year Statistics

1st year Probability for Business (at USC)

1st year Statistics for Business (at UCLA)

8. **Academic Service**

International:

Journals

Since 2012 Associate Editor, *Journal of Applied Probability*

2005-2010 Associate Editor, *Bernoulli*

Conferences and workshops

Organiser, Networks Pharmacology Workshop, Keble College, 15 September 2015

Co-organiser, Networks in Biological Sciences**,** *IMS Singapore*, 1 June - 31 July 2015

Co-organiser, Workshop on New Directions in Stein's Method*, IMS Singapore*, 18 - 29 May 2015

Co-organiser, CIRM workshop on *Limit Theorems in Dynamics and Applications,* Luminy, 7-11 July 2014

Co-organiser, program on *Probability and Discrete Mathematics in Mathematical Biology, IMS Singapore*, 14 Mar - 10 Jun 2011

Program Committees

EMS 2006, Bernoulli Society

SemStat 2002-2005 steering group

RECOMB 2000

Grant and appointment refereeing:

EPSRC, Newton Institute, Pembroke Stokes Fellowship;

AgroParisTech;

DFG, TU Munich, University of Göttingen;

NSF, Stanford University, USC Los Angeles;

Swedish Research Council; NUS Singapore;

The Netherlands Organisation for Scientific Research (NWO);

UNITED STATES - ISRAEL Binational Science Foundation

Other

Since 2012 IMS Nomination Panel

University:

2009-10 and since 2013 Mathematical and Physical Sciences Divisional Board

Since 2013 Mathematical and Physical Sciences Library Committee

Since 2007 Oxford Centre for Integrative Systems Biology, Scientific Board, see http://www.sysbio.ox.ac.uk/

Since 2004 CABDyN (**C**omplex **A**gent-**B**ased **Dy**namic **N**etworks) Scientific Management Board, see http://www.cabdyn.ox.ac.uk/complexity_home.asp

2005-2010 External member, AMORPH, see amorph.group.shef.ac.uk/info.html

Department of Statistics:

Chair, Research Strategy Committee, 2013 - 2015

Early Career Development Officer, since 2013

Chair, Library committee, 2004 – 2015 (except during leave)

Director of Graduate Studies (2001-4, 2012 and from October 2014)

Chair of Examiners, Part A (2012 - 2014) and Part B (2006 and 2007)

Keble College:

Networks Research Cluster: Instigator and convener, since 2008

Director of Studies in Mathematics, since October 2003 (except during maternity leave and sabbatical leave, April 2010 - December 2011)

Keble 2020 fundraising group

9. Selected Invited Lectures

27/7/2016	Estimating the number of communities in a network . Bayesian Methods for Networks, Isaac Newton Institute
12/7/2016	Chi-square Approximations with Stein's Method. World Congress in Probability and Statistics, Toronto
27/6/2016	Network Comparison. Statistics for Big Data Workshop, Brunel University
30/3/2016	Network Comparison. Complex Networks and Emerging Applications, ICMS, Edinburgh

18/12/2015	Networks in an Era of Big Data. Alan Turing Institute Scoping Workshop, London
17/11/2015	Networks as representations of complex data. Workshop on the Analysis of Complex Multi-Level Data, Oxford
28/9/2015	Networks as representations of complex data sets. Alan Turing Institute Scoping Workshop, Cambridge
15/7/2015	Alignment-free sequence and network comparison. Invited session lecture. Stochastic Processes and Applications, Oxford.
10/7/2015	Statistical Analysis of Networks: Network Comparison. Plenary lecture, European Meeting of Statisticians, Amsterdam.
28/5/2015	Bounds with Data and an Almost Sure Central Limit Theorem using Stein's Method. Invited lecture. Workshop on New Directions in Stein's Method, IMS Singapore.
8/1/2015	Network Comparison. Invited lecture. Theory of Big Data, UCL, London.
12/9/2014	Limit theorems, probability approximations and related areas Heriot Watt, Edinburgh: *Comparing distributions via their canonical Stein operators, and the effect of the prior on the posterior*
17/6/2014	IWAP, Antalya: *Quantifying the Influence of the Prior on the Posterior*
30/5/2014	CoMPLEX Annual Conference, UCL London: *Alignment-free network comparison*
15/8/2013	Building Bridges: Probability, Statistics and Applications, Braunschweig: *Shortest paths, gossip, and epidemics on networks*
12/6/2013	Uncertainty in Interaction Networks, Bath: *Phylogenetic tree reconstruction from protein interaction networks*
28/3/2013	British Mathematical Colloquium, Sheffield (morning lecture): *Gossip processes, epidemics and small-world networks*
19/3/2013	Large Evolving Networks, Bristol (Heilbronn Workshop): *Gossip processes and small-world networks*
13/6/2012	IWAP, Jerusalem: *Stein's method for the Beta distribution with application to the Pólya urn*
28/5/2012	Function Prediction in Complex Networks, Kavli Centre: *Models for protein-protein interaction networks: what do age and (large) degree tell us?*
19/4/2011	IMS Singapore: *Statistics for alignment-free sequence comparison*

13/1/2010	Journée *Bon Vent*, *Giovanni*, Paris: *Stein's method for normal approximation*
4/12/2009	Symposium on Probability Theory – in Honour of Professor Andrew Barbour, Zurich: *Gaussian approximations using Stein's method*
28/9/2009	NET 2009 Warwick: *Predicting protein characteristics, protein interactions, and binding sites using network information*
28/7/2009	Stochastic Processes and Applications, Berlin: *Gaussian approximation of functionals: Malliavin Calculus and Stein's Method* (Plenary lecture)
5/1 – 6/2/2009	IMS Singapore: Progress in Stein's Method. *Stein's method and stochastic analysis of Rademacher functionals*
13-18/7/2008	IBC 2008, Dublin: *Prediction in Protein-Protein Interaction Networks*
7-10/7/2008	IWAP, Compiegne: *On the length of the longest exact position match in a Markov sequence*
31/3-4/4/2008	Workshop on Stein's Method, IMS Singapore: *Multivariate exchangeable pairs in Stein's method for multivariate normal approximation*

9. Publications

1. Waqar Ali, Anatol E. Wegner, Robert E. Gaunt, Charlotte M. Deane & Gesine Reinert (2016). Comparison of large networks with sub-sampling strategies. To appear, Scientific Reports.

2. Matthew Coulson, Robert E. Gaunt and Gesine Reinert (2016). Poisson approximation of subgraph counts in stochastic block models and a graphon model. ESAIM: PS 20 (2016) 131–142.

3. Andreas Anastasiou and Gesine Reinert (2016). Bounds for the normal approximation of the maximum likelihood estimator. To appear, Bernoulli.

4. Robert Gaunt, Alastair Pickett and Gesine Reinert (2016). Chi-square approximation by Stein's method with application to Pearson's statistic. To appear, *Annals of Applied Probability*.

5. Oliver Kley, Claudia Klüppelberg, and Gesine Reinert (2016). Risk in a Large Claims Insurance Market with Bipartite Graph Structure. To appear, *Operations Research*.

6. Ren, J., Song, K., Deng, M., Reinert, G., Cannon, C. H., & Sun, F. (2015). Inference of Markovian Properties of Molecular Sequences from NGS Data and Applications to Comparative Genomics. *Bioinformatics*.

7. W. Ali, T. Rito, G. Reinert, F. Sun, and C. M. Deane (2014) Alignment-free protein interaction network comparison. *Bioinformatics* (2014) **30**, i430-i437.
8. L. Goldstein and G. Reinert (2013) Stein's method for the Beta distribution and the Pòlya-Eggenberger Urn. *Journal of Applied Probability* **4**, 1187-1205.
9. A.D. Barbour and G. Reinert (2013) Asymptotic behaviour of gossip processes and small-world networks. *Advances in Applied Probability* **45**, 895-1201.
10. K. Song, J. Ren, G. Reinert, M. Deng, M. S. Waterman and F. Sun (2013) New developments of alignment-free sequence comparison: measures, statistics and next-generation sequencing. *Briefings in Bioinformatics* 10.1093/bib/bbt067.
11. J. Ren, K. Song, F. Sun, M. Deng and G. Reinert (2013) Multiple Alignment-free Sequence Comparison. *Bioinformatics* **29**, Issue 21, 2690-2698.
12. A.D. Barbour and G. Reinert (2013) Approximating the epidemic curve. *Electronic Journal of Probability* **18**, Article 54.
13. Q. Luo, R. Hamer, G. Reinert and C.M. Deane (2013) Local Network Patterns in Protein-Protein Interfaces. *PLOS ONE* **8**, e5703.
14. M. Gomes, R. Hamer, G. Reinert, C.M. Deane. (2012) Mutual information and variants for protein domain-domain contact prediction. *BMC Research Notes* **5**, 472.
15. T. Rito, C.M. Deane, and G. Reinert. (2012) The importance of age and high degree, in Protein-Protein interaction networks. *Journal of Computational Biology,* **19**, 785-795.
16. Z. Zhai, G. Reinert, K. Song, M.S. Waterman, Y. Luan, and F. Sun. (2012) Normal and Compound Poisson Approximations for Pattern Occurrences in NGS Reads. *Journal of Computational Biology* **19**, 839-854.
17. K. Lin and G. Reinert. (2012) Joint vertex degrees in the inhomogeneous random graph model G(n, $\{P_{ij}\}$), *Adv. Applied Probability* **44**, 139-165.
18. A.D. Barbour and G. Reinert (2011) The shortest distance in random multi-type intersection graphs. *Random Structures and Algorithms* **39**, 179-209.
19. X. Liu, L.Wan, G. Reinert, M.S. Waterman, F. Sun, J. Li (2011) New powerful statistics for alignment-free sequence comparison under a pattern transfer model. *Journal of Theoretical Biology* **284**, 106-116.
20. W. Ali, C. Deane and G. Reinert (2011) Protein Interaction Networks and Their Statistical Analysis. Handbook of Statistical Systems Biology (eds M.P.H. Stumpf, D.J. Balding and M. Girolami), John Wiley & Sons Ltd, Chichester, UK.
21. G. Reinert (2011) Gaussian approximation of functionals: Malliavin calculus and Stein's method. Surveys in Stochastic Processes (eds: J. Blath, P. Imkeller and S. Roelly), European Mathematical Society Publishing House, Zurich, pp. 107-126.
22. I. Nourdin, G. Peccati and G.Reinert (2010) Stein's method and stochastic analysis of Rademacher functionals. *Electronic Journal of Probability* **15**, 1703-1742.
23. I. Nourdin, G. Peccati and G. Reinert (2010) Invariance principles for homogeneous sums: universality of Gaussian Wiener chaos. *The Annals of Probability* **38**, 1947-1985.
24. G. Reinert and A. Röllin (2010) U-statistics and random subgraph counts: Multivariate normal approximation via exchangeable pairs and embedding. *Journal of Applied Probability* **47**, 378-393.
25. T. Rito, Z. Wang, G. Reinert and C.M. Deane (2010) How threshold behaviour affects the use of subgraphs for network comparison. *Bioinformatics* **26**, vi611-7.

26. R. Hamer, Q. Luo, J. P. Armitage,G. Reinert and C.M. Deane (2010) i-Patch: Inter-Protein Contact Prediction using Local Network Information. *Proteins* **78**, 2781-97.
27. R. Hamer, P-Y. Chen, J.P. Armitage,G. Reinert and C.M. Deane (2010) Deciphering chemotaxis pathways using cross species comparisons. *BMC Systems Biology* **4** (11 January 2010)
28. Z.Y. Zhai, S.Y. Ku, Y.H. Luan, G. Reinert, M.S. Waterman and F.Z. Sun (2010) The Power of Detecting Enriched Patterns: An HMM Approach. *Journal of Computational Biology* **17**, 581-592.
29. L. Wan, G. Reinert, F. Sun, and M.S. Waterman (2010) Alignment-free Sequence Comparison (II) : Theoretical Power of Comparison Statistics. *Journal of Computational Biology* **17**, 1467-1490.
30. G. Reinert and A. Roellin (2009) Multivariate normal approximation with Stein's method of exchangeable pairs under a general linearity condition. *The Annals of Probability* **37**, 2150-2173.
31. G. Reinert, D. Chew, F. Sun, and M.S. Waterman(2009) Alignment-Free Sequence Comparison (I): Statistics and Power. *Journal of Computational Biology* **16**, 1-20
32. I. Nourdin, G. Peccati and G. Reinert (2009) Second order Poincaré inequalities and CLTs on Wiener space. *Journal of Functional Analysis* **257**, 593-609.
33. J.-P. Onnela, N.F. Johnson, S. Gourley, G. Reinert and M. Spagat (2009) Sampling bias in systems with structural heterogeneity and limited internal diffusion. *Europhysics Letters* **85**, 28001.
34. P.-Y. Chen, C.M. Deane and G. Reinert (2008) Predicting and Validating Protein Interactions Using Network Structure. *PLoS Computational Biology* **4**, e1000118.
35. P. Eichelsbacher and G. Reinert (2008).). Stein's method for discrete Gibbs measures. *The Annals of Probability* **18**, 1588-1618.
36. Johnson, N.F., Spagat, M., Gourley, S., Onnela, J.P., Reinert, G. (2008) Bias in epidemiological studies of conflict mortality. *Journal of Peace Research*, **45**, 653-663.
37. J. Crowcroft, R. Allsop, A.P. Smith, P. Varaiya, R. Gibbens, M. Bell, P. Key, S. Borst, G. Reinert, K. Briggs, R. Mondragon, S. Zhou, R. Srikant, D. Wischik, R.J. Atkinson, M. Smith, M. Patriksson, D. Ralph, H.R. Kirby, J.M. Brooke, F. Kelly, A. Odlyzko, G. Raina (2008) Optimal resource allocation for multicast sessions in multi-hop wireless networks - Discussion. *Philos. T.R. Soc*. A **366** (1872):2075-2092 13 Jun 2008.
38. P.-Y.Chen, C.M. Deane and G. Reinert (2007) A Statistical Approach Using Network Structure in the Prediction of Protein Characteristics. *Bioinformatics* **23**, 2314 -2321.
39. G. Reinert and M.S. Waterman (2007) On the length of the longest exact position match in a random sequence, *Transactions of Computational Biology and Bioinformatics* **4**, 153-156.
40. T.A.B. Snijders, T. Robinson, A.C. Atkinson, M. Riani, I.C. Gormley, T.B. Murphy, T. Sweeting, D.S. Leslie, N.T. Longford, J.T. Kent, T. Lawrance, E.M. Airoldi, J. Besag, D. Blei, S.E. Fienberg, R. Breiger, C.T. Butts, P. Doreian, V. Batageli, A. Ferligoj, D Draper, M.A.J. van Duijn, K. Faust, M. Petrescu-Prahova, J.J. Forster, A. Gelman, S.M. Goodreau, P.E. Greenwood, K. Gruenberg, B. Francis, C. Hennig, P.D. Hoff,

D.R. Hunter, D. Husmeier, C. Glasbey, D. Krackhardt, J. Kuha, A. Skrondal, A. Lawson, T.F. Liao, B. Mendes, D. Draper, G. Reinert, S. Richardson, A. Lewin, D.M. Titterington, S. Wasserman, A.V. Werhil, P/ Ghazal, P. (2007). Discussion on the paper by Handcock, Raftery and Tantrum. *J. Roy. Stat. Soc.* A STA **170**:322-354.

41. L. Goldstein and G. Reinert (2006) Total Variation Distance for Poisson Subset Numbers' in *Annals of Combinatorics* **10**, 331-341
42. A.D. Barbour and G. Reinert (2006) Discrete small world networks. *Electronic Journal of Probability* **11**, 1234-1283.
43. L. Goldstein and G. Reinert (2005) Distributional transformations, orthogonal polynomials, and Stein characterizations. *Journal of Theoretical Probability* **18**, 185-208. *This paper also appeared in Russian translation, Obozr. Prikl. Prom. Mat., (OP&PM Surveys in Applied and Industrial Mathematics) 2006, v. 13, No. 1, pp. 28—50.*
44. L. Goldstein and G. Reinert (2005) Zero biasing in one and higher dimensions, and applications. In: Proceedings of the conference in honor of Charles Stein, A.D. Barbour, L.H.Y. Chen, eds. World Scientific, Singapore, 1-18.
45. G. Reinert (2005)Three general approaches to Stein's method. In: A Program in Honour of Charles Stein: Tutorial Lecture Notes. A.D. Barbour, L.H.Y. Chen, eds. World Scientific, Singapore (2005), 183-221.
46. G. Reinert, S. Schbath, and M.S. Waterman (2005) Probabilistic and Statistical Properties of Finite Words in Finite Sequences. In: Lothaire: Applied Combinatorics on Words, Cambridge University Press, J. Berstel, D. Perrin, eds., 268-352.
47. S. Holmes and G. Reinert (2004) Stein's method for the bootstrap. In: Stein's Method: Expository Lectures and Applications. IMS Lecture Notes 46, Hayward, P. Diaconis and S. Holmes, eds., 95-133.
48. M. Huber and G. Reinert (2004)The stationary distribution in the antivoter model: Exact Sampling and Approximations. In: Stein's Method: Expository Lectures and Applications. IMS Lecture Notes 46, Hayward, P. Diaconis and S. Holmes, eds. 79-93.
49. A.D. Barbour and G. Reinert (2003) Small world networks. *Extended abstract* for MaPhySto and Dynstoch Workshop on Dynamical Stochastic Modelling in Biology, Copenhagen 2003.
50. A.D. Barbour and G. Reinert (2001) Small worlds. *Random Structures and Algorithms* **19**, 54-74.
51. G. Reinert (2001) Stein's method for epidemic processes. In *Complex Stochastic Systems*. O.E. Barndorff-Nielsen, D.R. Cox and C. Klueppelberg, eds., Chapman and Hall, Boca Raton etc., 235-275.
52. A.D. Barbour, R.M. Gerrard and G. Reinert (2000) Iterates of expanding maps. *Probab. Theory Rel. Fields **116***, 151-180.
53. G. Reinert, S. Schbath and M.S. Waterman (2000) Probabilistic and statistical properties of words. *Journal of Computational Biology* **7**, 1-46.
54. G. Reinert (1999) An introduction to Stein's method and application to empirical measures. *In Modelos Estocasticos*. M. Gonzalez and L.G. Gorostiza, eds., Sociedad Matematica Mexicana, 65-120. (Proceedings of the Symposium of Probability and Stochastic Processes, Guanajuato, Mexico).

55. G. Reinert and S. Schbath (1999) Compound Poisson approximations for occurrences of multiple words. *In Statistics in Molecular Biology and Genetics*. F. Seiller-Moiseiwitsch, ed., IMS Lecture Notes, Providence, 257-275.
56. G. Reinert and S. Schbath (1998) Compound Poisson and Poisson process approximations for occurrences of multiple words in Markov chains. *Journal of Computational Biology* **5**, 223-253
57. G. Reinert (1998) Couplings for normal approximations with Stein's method. *In Microsurveys in Discrete Probability*. D. Aldous, J. Propp eds., Dimacs series. AMS, 193-207.
58. L. Goldstein and G. Reinert (1997) Stein's method and the zero bias transformation with application to simple random sampling. *Ann. Appl. Probab*.**7**, 935-952.
59. R. Arratia, D. Martin, G. Reinert and M.S. Waterman (1996) Poisson approximation for long repeats in a random sequence with application to sequencing by hybridization. *Journal of Computational Biology* **3**, 425-463
60. G. Reinert (1995)A weak law of large numbers for empirical measures via Stein's method. *Ann. Probab*.**5**, 23, 334-354
61. G. Reinert (1995)The asymptotic evolution of the General Stochastic Epidemic. *Ann. Appl. Probab.***5**, 1061-1086.
62. G. Reinert (1992) A threshold theorem for the general stochastic epidemic via a discrete approach. *Statistics & Probability Letters* **14**, 85-90.