

**School of Biological Sciences
Section of Applied Statistics**



**Recent Developments in
Capture-Recapture Methods
and their Applications
12-13 July 2007**

Conference Programme

Organisation

Scientific Committee

- **Dankmar Böhning** (Chair & Organisation)
Section of Applied Statistics, University of Reading, UK
- **David Borchers**
School of Mathematics & Statistics, University of St. Andrews, UK
- **Mike Dennett**
Section of Applied Statistics, University of Reading, UK
- **James Gallagher**
Section of Applied Statistics, University of Reading, UK
- **Peter van der Heijden**
Utrecht University, NL
- **Karen Ayres**
Section of Applied Statistics, University of Reading, UK

Contact details

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Conference received support from:

- MINITAB
- Chapman & Hall / CRC
- Wiley & Sons
- School of Biological Sciences, University of Reading

Thursday 12th July: Morning (Nike Theatre, Agriculture Building)

0900 - 0915	<p>Welcome</p> <p>Professor Gordon Marshall, Vice-Chancellor of the University of Reading Professor Nick Battey, Head of School of Biological Sciences Dr Mike Dennett, Head of Section of Applied Statistics</p>
0915 - 1000	<p>Opening Keynote Session (Chair: Dankmar Böhning)</p> <p>Anne Chao Institute of Statistics, National Tsing Hua University, Taiwan The applications of capture-recapture models to biodiversity estimation and epidemiological surveillance</p>
1000 - 1030	<p>Invited Speakers I (Chair: Stephen E. Fienberg)</p> <p>Ken Burnham Department of Fishery and Wildlife Biology, Colorado State University, USA Challenges and opportunities for analysis of capture-recapture data</p>
1030 - 1100	<p><i>Coffee</i> (1L04 Agriculture Building)</p>
1100 - 1215	<p>Contributed Papers I (Chair: Slava Epstein)</p> <p>Kathryn Barger Cornell University, USA Bayesian Estimation of the Number of Species using Noninformative Priors</p> <p>Elizabeth Turner, Alain C. Vandal, Russell J. Steele McGill University, Canada Modelling source dependence with random effects</p> <p>Alessio Farcomeni and Luca Tardella University of Rome “La Sapienza”, Italy Default Bayesian Methods for Capture-Recapture Models</p>
1215 - 1330	<p><i>Lunch</i> (Foyer Agriculture Building)</p>

Thursday 12th July: Afternoon (Nike Theatre, Agriculture Building)

1215 - 1330	<i>Lunch</i> (1L04 Agriculture Building)
1330 - 1500	Invited Speakers II (Chair: Anne Chao) Stephen E. Fienberg Department of Statistics, Carnegie Mellon University, USA Multiple systems estimation for population estimation, record linkage, and missing data: integration of methodology Changxuan Mao Department of Statistics, University of California at Riverside, USA Population size estimation: log-linear models, mixture models, and connections Ruth King School of Mathematics and Statistics, University of St Andrews, UK Recent advances in Bayesian analysis of ecological capture-recapture data
1500 - 1530	<i>Tea</i> (1L04 Agriculture Building)
1530 - 1645	Contributed Papers II (Chair: Chukiatt Viwatwongkasem) Yan Wang and Joanne Thandrayen University of South Australia, Australia Estimating the number of homeless people in Adelaide CBD using capture-recapture method Irene Schmidtman IMBEI, University Hospital of Johannes Gutenberg-Universität Mainz, Germany Estimating completeness in cancer registries – comparing methods in a simulation study Raika Durusoy and Ali Osman Karababa Ege University Medical School, Izmir, Turkey Evaluation of the surveillance of serologically detectable communicable diseases in Izmir in 2003 through laboratory data and estimation of numbers of cases through capture-recapture

Thursday 12th July: Late Afternoon (G03, Harry Pitt Building)

1700 - 1830	<p>Poster Session - sponsored by MINITAB (wine and snacks available)</p> <ol style="list-style-type: none"> 1. Bernard Baffour, Division of Social Statistics, University of Southampton, UK. <i>Triple System Estimation of Census Under-enumeration</i> 2. Sarah Brittain, Applied Statistics, University of Reading, UK. <i>A Comparison of Estimators for the Two-Source Situation</i> 3. Andrew Grant, Statistics Unit, Health Protection Agency, London, UK. <i>The Lincoln–Petersen Model—Are All the Parameters Needed?</i> 4. Krisana Lanumteang, Applied Statistics, University of Reading, UK. <i>Extending Zelterman’s Estimator</i> 5. Chandanie Naravatna, Department of Mathematics and Computer Science, Open University of Sri Lanka, Sri Lanka. <i>Extending Zelterman's Estimator of Population Size to Clustered Data</i> 6. Isak Neema. Applied Statistics, University of Reading, UK. <i>Estimating the Size of a Criminal Population from Police Statistics – a Capture-Recapture (CR) Approach</i> 7. Busaba Supawattanabodee, Clinical Epidemiology Unit, Vajira Hospital, Bangkok, Thailand. <i>Estimating the Number of Drug Users in Bangkok: A Capture-Recapture Method</i> 8. Laure Vaissade, Chargée d'études au pôle "Indicateurs" Observatoire Français des Drogues et des Toxicomanies (OFDT), Paris, France. <i>Estimating the prevalence of drug misuse using capture-recapture in six French cities</i> 9. Dankmar Böhning, Applied Statistics, University of Reading, UK. <i>Capture-Recapture Techniques in Human Populations</i> <p><i>Posters should be put on boards in G03 (Harry Pitt Building) during Thursday prior to the session!</i></p> <p><i>Prizes will be given to the two best posters</i></p>
1930 - 2200	Conference Dinner (Blue Room, Park House)

Friday 13th July: Morning (Nike Theatre, Agriculture Building)

0900 - 1030	<p>Invited Speakers III (Chair: John Bunge)</p> <p>David Borchers School of Mathematics & Statistics, University of St. Andrews, UK Spatially explicit maximum likelihood methods for capture-recapture studies</p> <p>Slava Epstein Faculty of Biology, North-eastern University, USA Estimation of global microbial richness</p> <p>Jean-Dominique Lebreton CEFE, CNRS, France Heterogeneity in open population models: estimating the number of wolves in the French Alps based on molecular data</p>
1030 - 1100	<p><i>Coffee</i> (1L04 Agriculture Building)</p>
1100 - 1230	<p>Invited Speakers IV (Chair: David Borchers)</p> <p>Shirley Pledger School of Mathematics, Statistics and Computer Science, Victoria University, Wellington, New Zealand Using mixtures to model heterogeneity in capture-recapture models</p> <p>Maarten Cruyff Utrecht University, Netherlands Population size estimation using counts derived from a single registration: truncated Poisson and negative binomial regression, and mixtures</p> <p>Victor Javier del Rio Vilas Veterinary Laboratories Agency, UK Sleepless nights counting missing sheep: applications of capture-recapture models to scrapie in Great Britain</p>
1230 - 1400	<p><i>Lunch</i> (1L04 Agriculture Building)</p>

Friday 13th July: Afternoon (Nike Theatre, Agriculture Building)

1400 - 1500	<p>Invited Speakers V (Chair: Peter van der Heijden)</p> <p>Gordon Hay Centre for Drug Misuse Research, University of Glasgow, UK Capture-recapture methods to estimate the prevalence of problem drug use at the national and local level</p> <p>Chukiat Viwatwongkasem Biostatistics, Public Health, Mahidol University, Thailand Estimating population size using the truncated count model allowing for contaminations</p>
1500 - 1530	<p><i>Tea</i> (1L04 Agriculture Building)</p>
1530 - 1620	<p>Contributed Papers III (Chair: Gordon Hay)</p> <p>Romesh Silva Demography Department, University of California, Berkeley, USA Estimating Conflict-Related Mortality in Timor-Leste, 1974-1999: A Comparative Review of Demographic and Capture-Recapture Estimation Methods</p> <p>Rujirek Boosarawongse Department of Applied Statistics, KMIT Ladkrabang, Bangkok, Thailand The Estimated Variance for the Zelterman Estimator of the Population Size</p>
1620 - 1720	<p>Invited Speakers VI (Chair: Shirley Pledger)</p> <p>Peter van der Heijden Department of Statistics and Methods, Utrecht University, The Netherlands Multiple record systems estimation with structurally missing data patterns</p> <p>Byron Morgan Institute of Mathematics, Statistics and Actuarial Science, University of Kent, UK New methods for including covariates in models for the survival of wild animals</p>
1720 - 1805	<p>Closing Keynote Speaker (Chair: Byron Morgan)</p> <p>John Bunge Department of Statistical Science, Cornell University, USA Connecting abundance and incidence models</p>
1805 - 1820	<p>Closing Remarks and Poster Prize Award</p>

Conference Venue

The conference will be based in the Nike Theatre in the Agriculture building, with state-of-the-art lecture theatre facilities. The **Agriculture building** is situated at the Earley Gate end of Whiteknights campus.



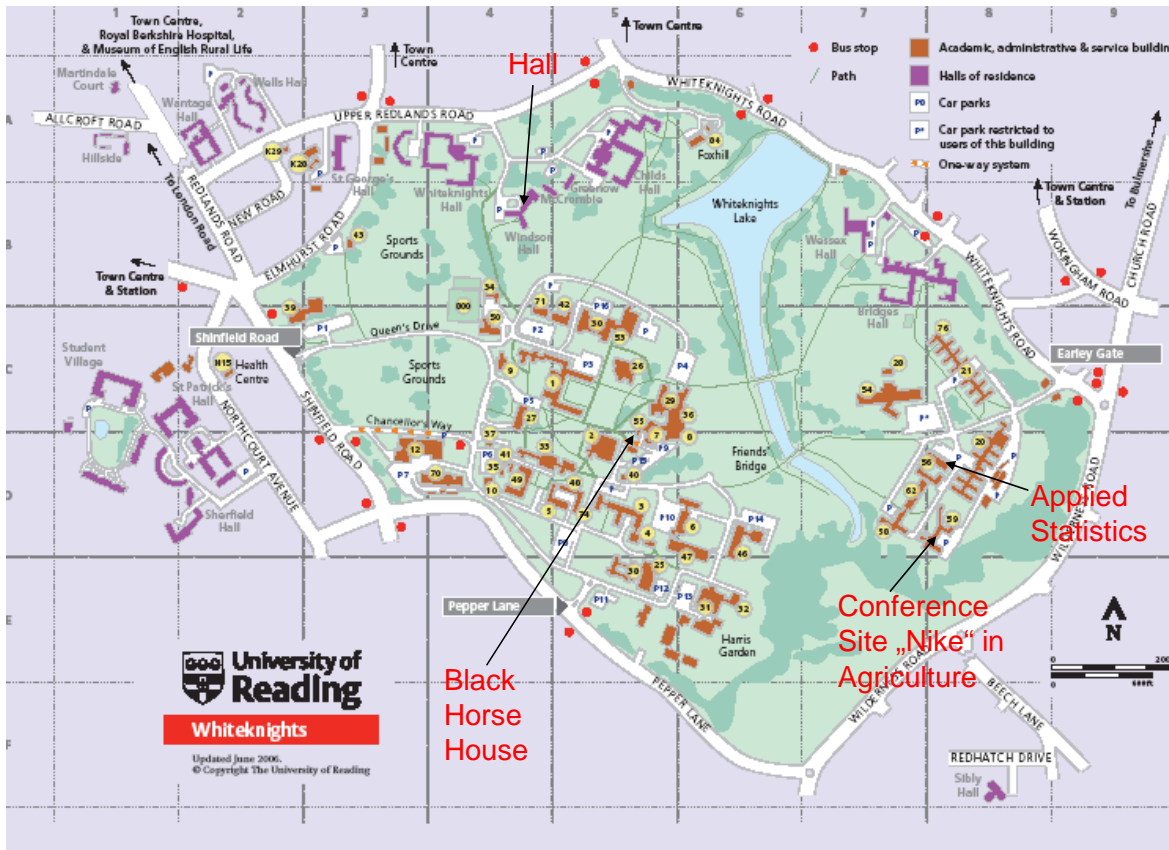
The poster session on Thursday afternoon (17.00- 18.30) will take place in the ground floor (G03) of the **Harry Pitt building (Applied Statistics)** which is located close to the Agriculture building at Earley Gate where most of the conference takes place.



Coffee/Lunch/Tea: 1L04 Agriculture Building

Exhibitors: 1L04 Agriculture Building

Map of Whitenights Campus



(explanations of numbers: see next page)

Name & grid ref	Building						
29	3sixty bar C5	Students' Union					
41	Accommodation Office D4	Whiteknights House Annexe					
59	Agricultural and Food Economics D8	Agriculture					
59	Agriculture D8	Agriculture					
48	Allen Laboratory D5	The Allen Laboratory					
59	Analytical Laboratory D8	Agriculture					
1	Applied Linguistics	HUMSS					
56	Applied Statistics D7	Harry Pitt					
74	Archaeology D5	Archaeology					
43	Athletics Pavilion B3	Athletics Pavilion					
31	Biocentre	Plant Sciences					
55	Black Horse House C5	Black Horse House					
42	Bookshop C5	Language Resource Centre (incl Uni Bookshop)					
59	British Council D8	Agriculture					
27	Business Development Office C4	Whiteknights House					
1	Business School C5	HUMSS					
33	Business School D4	URS Building					
42	CALS (Centre for Applied Language Studies) C5	Language Resource Centre (incl Uni Bookshop)					
10	Careers Advisory Service D4	Blandford Lodge					
7	Cedars (Restaurant) D5	The Cedars					
59	Centre for Agricultural Strategy D8	Agriculture					
59	Centre for Agri-Environmental Research D8	Agriculture					
10	Centre for Career Management Skills	Blandford Lodge					
1	Centre for Entrepreneurship C5	HUMSS					
41	Centre for the International Foundation Programme D4	Whiteknights House Annexe					
40	Chaplaincy Centre D5	Park House Lodge					
6	Chemistry D6	Chemistry and Pharmacy					
1	Classics C5	HUMSS					
62	Clinical Language Sciences D7	Psychology					
30	Cole Museum of Zoology C5	AMS					
33	College of Estate Management D4	URS Building					
8	Commercial Services, Residential and Catering D6	Park House					
27	Communications Office C4	Whiteknights House					
38	Computer Science E5	Systems Engineering					
33	Construction Management and Engineering D4	URS Building					
N15	Counselling Service C2	University Health Centre & Dental Centre					
59	Crop Protection Unit D8	Agriculture					
38	Cybernetics E5	Systems Engineering					
N15	Dental Centre C2	University Health Centre & Dental Centre					
10	Development and Alumni Relations D4	Blandford Lodge					
26	Dolché Vita Café	Palmer Building					
33	Economics D4	URS Building					
1	Economics C5	HUMSS					
25	Electronic Engineering E5	Engineering					
25	Engineering E5	Engineering					
1	English and American Literature C5	HUMSS					
21	Enterprise Hub C8	TOB 2					
30	Environmental Biology & BioMolecular Sciences C5	AMS					
31	Environmental Biology & BioMolecular Sciences E6	Plant Sciences					
53	Environmental Biology & BioMolecular Sciences C5	AMS (Microbiology wing)					
32	Environmental Biology & Computational Biology E6	Philip Lyle					
56	ESSC (Environmental Systems Science Centre) D7	Harry Pitt					
50	Estates Services Dept C4	Facilities Management					
1	European Studies C5	HUMSS					
50	Facilities Management Division C4	Facilities Management					
1	Faculty of Arts and Humanities Office C5	HUMSS					
1	Faculty of Economic and Social Sciences Office C5	HUMSS					
59	Farm Management Unit D8	Agriculture					
27	Finance Division C4	Whiteknights House					
20	Fine Art D8	TOB 1					
47	Food Biosciences D6	Food Bioscience and Pharmacy					
1	French Studies C5	HUMSS					
54	Fusion Café C7	Science & Technology Centre					
49	Geography D4	Geography					
5	Geoscience D4	Geoscience					
1	German Studies C5	HUMSS					
50	Grounds Maintenance Office C4	Facilities Management					
34	Grounds Maintenance Yard B4	Facilities Management					
3	Health & Safety Services D5	Physics					
N15	Health Centre & Dental Centre C2						
1	History C5	HUMSS					
1	History of Art C5	HUMSS					
5	Human and Environmental Sciences D4	Geoscience					
1	Humanities and Social Sciences (HumSS) C5	HUMSS					
8	Indigo C6	Students' Union Extension					
32	Informatics Research Centre E6	Philip Lyle					
35	Insurance Office D4	Blandford East					
42	Institute-wide Language Programme C5	Language Resource Centre (incl Uni Bookshop)					
59	International and Rural Development D8	Agriculture					
49	International and Study Abroad Office D4	Geography					
71	ICMA Centre C4	ICMA Centre					
4	IT Services Centre D5	Mathematics & IT Services					
1	Italian Studies C5	HUMSS					
1	Japanese Studies C5	HUMSS					
3	Joint Faculty Office for Science and LifeSciences - Admin & PG D5	Physics					
59	Joint Faculty Office for Science and LifeSciences - UG D8	Agriculture					
38	Knowledge Transfer Centre E5	Systems Engineering					
42	Languages and European Studies C5	Language Resource Centre (incl Uni Bookshop)					
84	Law A6	Foxhill House					
2	Library D5						
1	Linguistics & Applied Language Studies C5	HUMSS					
55	Lloyds Bank C5	Black Horse House					
1	Management (Dept of) C5	HUMSS					
4	Mathematics D5	Mathematics & IT Services					
N15	Medical Practice C2	University Health Centre & Dental Centre					
58	Meteorology D7	Meteorology					
56	MPS Unit D7	Harry Pitt					
37	Muslim Centre D4	Archway Lodge					
47	National Centre for Biotechnology Education D6	Food Biosciences					
8	Orange Room (Restaurant) C6	Students' Union Extension					
26	Palmer Building C5						
35	Pensions Office D4	Blandford East					
6	Pharmacy D6	Chemistry and Pharmacy					
47	Pharmacy D6	Food Biosciences and Pharmacy					
1	Philosophy C5	HUMSS					
3	Physics D5	Physics					
31	Plant Sciences E6	Plant Sciences					
1	Politics & International Relations C5	HUMSS					
62	Psychology D7	Psychology					
8	Purchasing Department C6	Park House					
26	Reading Film Theatre C5	Palmer Building					
46	Reading Scientific Services Ltd (RSSL) D6	The Lord Zuckerman Research Centre					
33	Real Estate and Planning D4	URS Building					
28	Reading University Atmospheric Observatory C7						
27	Research & Enterprise Services C4	Whiteknights House					
54	Science & Technology Centre C7	Science & Technology Centre					
27	Security Office C4	Whiteknights House					
8	Senior Common Room D6	Park House					
71	Snack Bar C4	ICMA Centre					
1	Snack Bar C5	HUMSS					
29	Snack Bar C5	Students' Union					
54	Snack Bar C7	Science & Technology Centre					
59	Snack Bar D8	Agriculture					
76	Social Club (Employees) C8	TOB 2					
1	Sociology C5	HUMSS					
70	Soil Science D4	Soil Science					
62	Speech and Language Therapy Clinic D7	Psychology					
39	Sports Centre C2	Wolfendon Sports Centre (incl Squash Courts)					
56	Statistical Services Centre D7	Harry Pitt					
27	Student Recruitment & Schools Liaison C4	Whiteknights House					
27	Student Services C4	Whiteknights House					
29	Students' Union C5						
29	Students' Union Nursery C5	Students' Union					
800	Synthetic Turf Pitch B4	Synthetic Turf Pitch					
21	Typography & Graphic Communication C8	TOB 2					
21	University of Reading Pre-school C8	TOB 2					
1	Ure Museum of Greek Archaeology C5	HUMSS					
33	URS D4	URS					
59	Veterinary Epidemiology and Economic Research Unit (VEERU) D8	Agriculture					
27	Vice-Chancellor's Office C4	Whiteknights House					
27	Whiteknights House C4						
59	Widening Participation D8	Agriculture					