

## British & Irish Region Newsletter — December 2011



St Andrew's castle & bay (Photo Ruth King)

### St Andrews to host 2013 Channel Network Conference

*James Carpenter writes—* The regional committee are delighted to announce that the next Channel Network Conference will take place at St Andrews between 3rd and 5th July 2013.

A full programme of invited and contributed sessions is planned, beginning with workshops on Wednesday 3rd. In addition, it is proposed the conference will host the 2013 Fisher Memorial Lecture.

Accommodation will be in New Hall, opened in 1993 and less than 10 minutes walk from the historic city centre and the lecture theatres where the main sessions will take place.

The stage is set for an scientifically excellent and memorable meeting—book the date!

### Next meeting: Model selection for genetic and epidemiological data, 29 March 2012

This meeting will take place at the London School of Hygiene & Tropical Medicine Manson Lecture theatre on the afternoon of 29th March. The programme is as follows:

13.30–14.15: Challenges for model selection in etiologic studies, *Stijn Vansteelandt, Ghent University and LSHTM*

14.15–15.00: Approximate Bayesian Computation model choice and relevant summary statistics, *Christian Robert, Université Paris Dauphine*

- 15.00–15.30: *Tea*
- 15.30–16.15: Improved heritability estimation using linear mixed models, *Doug Speed, University College London*
- 16.15–17.00: Link functions in multi-locus genetic models, *David Clayton, University of Cambridge*

Abstracts, and registration details, are available on the regional website, [www.bir.biometricsociety.org/](http://www.bir.biometricsociety.org/)

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### President's corner



*Regional President John Hinde writes:—* It is gratifying to look over this newsletter and see the range of activities from what is a relatively small region of the Society. The variety of meetings in 2011 reflects the diversity of our membership, both in interest and location. In March we visited Manchester for a medical related meeting, in April it was off to Bordeaux for the Channel Network meeting (the next Network Meeting will be in St Andrews in 2013), and in June to Galway for our Summer Meeting. In October we were at Rothamsted for a meeting on metagenomics and in November in London for a meeting on animal movement and the AGM. Brief reports of these meetings can be found elsewhere.

At the AGM we were delighted to award the inaugural Regional Prize (jointly sponsored with the Fisher Memorial Trust) to Dr Rachel McCrea (see p. 2) This is one of our initiatives to encourage young biometricians, along with our free membership for students. Supervisors please note and encourage your students to join. This is particularly relevant for those who wish to attend the forthcoming IBC in Kobe in (*continued on p. 3*)

# Please pay your subs today!

Mark Brewer

Full and retired members are reminded that subscriptions for 2012 are due on 1st January 2012. The current annual subscriptions rates—**which compared with other societies represent excellent value**—are

- £40 (50 euros) for full members
- £20 (25 euros) for retired members.

Full, student and retired members are entitled to on-line access to Biometrics, JABES and the Biometric Bulletin, together with the regional newsletter.

Members can also elect to receive paper copies of journals, which are available at the following costs:

- Biometrics and the Biometric Bulletin: £7 (10 euros) extra
- JABES and the Biometric Bulletin: £7 (10 euros) extra
- JABES, Biometrics and the Biometric Bulletin: £14 (20 euros) extra

For those who wish to pay by cheque, the membership renewal form on p.6 should be completed and returned to the address shown. We can accept cheques or bank transfers in Euros. If you have any questions please email me at [markb@bioss.ac.uk](mailto:markb@bioss.ac.uk) ■

## Rachel McCrea awarded BIR/FMT prize

James Carpenter



Rachel McCrea (University of Kent), pictured left with regional president John Hinde, was the inaugural winner of the new prize for career young Biometricians, jointly sponsored by British and Irish Region and the Fisher Memorial Trust.

At the Annual General Meeting in November, Rachel received a diploma and cheque for £1000. The award was for her paper 'Multistate mark-recapture model selection using score tests' (McCrea, R.S. and Morgan B.J.T.

*Biometrics*, 2011). Gurutzeta Guillera-Arroita (pictured right with John Hinde) was also highly commended by the judges for her paper 'Species occupancy modelling for detection data collected along a transect' (Guillera-Arroita, G., Morgan, B.J.T., Ridout, M. S. and Linkie, M, *Journal of Agricultural, Biological and Ecological Statistics*, 2011).

The judges on this occasion were John Hinde (chair) Chris Glasbey (BioSS) and Cajo ter Braak (Netherlands). The next prize will be awarded in 2013, with a call for nominations in Autumn 2012. ■



INTERNATIONAL BIOMETRIC CONFERENCE, 26-31 AUGUST, KOBE, JAPAN

## Abstract deadline: 15 Jan 2012

James Carpenter

A stimulating invited scientific programme for the forthcoming IBC in Kobe, Japan, has been published. This covers the whole range of bio-medical data, including ecology (organised by Byron Morgan, BIR), event history, genetics of rare diseases, analysis of large databases of routinely collected health related data and approximate Bayesian computation. Full details at [http://secretariat.ne.jp/ibc2012/invited\\_programme.html](http://secretariat.ne.jp/ibc2012/invited_programme.html)

Contributed abstracts should be submitted at [http://secretariat.ne.jp/ibc2012/online\\_submission.html](http://secretariat.ne.jp/ibc2012/online_submission.html) by the 15 January. The results will be notified by 31 March.

The BIR, in conjunction with the Fisher Memorial Trust, will be offering a number of bursaries to support career young members of BIR who wish to attend. Intending applicants should submit their abstract in the usual way, and watch the regional website towards the end of January for details of the bursary application process. ■

## President's corner (continued)

John Hinde

(continued from page 1) August 2012; an announcement on regional bursaries for members to attend this will be made shortly. Plans for BIR meetings in 2012 are under way and don't forget to visit the website to keep up-to-

date. Please also visit the members forum to make suggestions to the Committee, both for future meetings that you would be interested in and places that you think we should visit; even better, perhaps you would be willing to host a meeting? ■

## News from the AGM

James Carpenter

The AGM took place on Thursday 9th November at Charles Darwin House, home of the Society of Biology, during the lunchbreak of the meeting on Animal Movement. Twenty members were present.

The meeting heard news of a successful year for the Region. The IBS in Florianópolis was well attended by BIR members, who were involved in both pre-conference courses, invited and contributed sessions. A highlight was the award of honorary life membership to Professor Robert Curnow (Reading University). Once again members of the region benefitted from the generosity of the Fisher Memorial Trust, which contributed £2000 towards a bursary fund of £4500, which enabled 8 bursaries for career young members to be provided.

Members also heard reports of a successful meeting on time varying confounding in medical research, in March, together with the Channel Network Conference in Bordeaux. Reports of more recent meetings, and the presentation of the prize, are elsewhere in this newsletter.

Members received the audited accounts, which show a

balance of £17,800, and thanked the auditor, Geoff Freeman. The membership secretary, Diana Cole reported that full membership has reduced by 10, but student membership is substantially higher. Members were again encouraged to promote membership of the society in their institutions: at £40 a year it represents excellent value.

The AGM made the following elections:

- Incoming vice-president: Simon Thompson (University of Cambridge)
- Treasurer: Mark Brewer (Bioss)
- to the regional committee:  
Daniel Farewell (University of Cardiff) and William Browne (University of Bristol);
- as auditor for 2012: Suzanne Clark (Rothamsted)

John Hinde thanked the outgoing officers and committee members: Byron Morgan (outgoing vice president); Peter Rigsby (treasurer since 2003), and committee members Adel Marshall and John Whittaker. ■

### MEETING REPORT

## Summer meeting 2011

John Hinde



Galway shoreline (photo John Hinde)

was devoted to a programme of talks by two locals and a distinguished US visitor. Coloin Minto (Galway-Mayo

The Region held its annual summer meeting on Friday June 10 as guest of the National University of Ireland Galway. The morning

Institute of Technology) talked on incorporating time-varying parameters in fish population dynamics models. Norma Coffey (NUI Galway) described the use of linear mixed effects models for clustering time-course microarray data. To round off the morning, Ray Carroll (Texas A & M) entertained us with details of his stay in Ireland, the difference between East and West Texas, and a discussion of gene-environment interactions in case-control studies. The formal part of the meeting ended with two most enjoyable items of Society Business. The first was the presentation of IBS Honorary Life Membership to Robert

Curnow (see photograph below); Byron Morgan outlined the successful nomination from the BIR and then Robert replied with a brief account of his life in biometry. Finally, Robert announced the winner of the joint BIR and Fisher Memorial Trust Young Biometrician Prize (see p. 2).

After an informal lunch an intrepid group of participants set off to visit Carna Research Station located on the wild Connemara Coast.

We were given a tour of the facilities by Dr Richard Fitzgerald who described the history of the station from an undergraduate marine science resource to the present research driven centre. Areas of expertise include seaweed, shellfish and fish farming. We were able to see an experiment from a current project on a cod broodstock and

breeding programme, where the effect of sea temperature was visibly apparent with no need for detailed or subtle statistical analysis.

The excursion ended with an eventually successful detour to see Mace Head, an atmospheric monitoring station which has unique western exposure to the North Atlantic and the incoming rain as we all found out! Don't be fooled by the sunshine in the pictures, the day was marked by typical West of Ireland weather: four seasons in one day. ■



*Byron Morgan presents IBS life membership to Robert Curnow (photo: John Hinde)*

## MEETING REPORT

# Metagenomics meeting: October 2011

Sue Welham

This meeting, held at Rothamsted Research on October 5th, attracted nearly 50 participants from both the BIR and other regions.

In broad terms, metagenomics is the study of the total genomic content of microbial communities and is of increasing interest in agricultural, medical and environmental studies. The meeting opened with an introduction to the subject area by three local speakers: Ian Clark presented the biological background and questions of interest; Michael Defoin-Platell described some bioinformatic tools available to preprocess, and to some extent analyse, metagenomic data, and Elisa Loza gave an overview of some statistical challenges with—as appropriate to the location—some emphasis on design issues. Suparna Mitra (Tuebingen University) followed this with a presentation on 'Comparative metagenome analysis', illustrating comparison across samples using the software MEGAN (MEtaGenome ANalyser).

We then took a break for lunch, with a few posters on display to provoke discussion. Vincent Plagnol (University College London) began the afternoon session, speaking on

statistical and computational applications of short read DNA sequencing for viral sequence discovery. In particular, he outlined the practical and computational challenges involved in detection and identification of rare viruses present at low levels in samples. Daniel Falush (Max Planck Institute, Leipzig) followed with a presentation entitled 'Statistical analysis of microevolutionary variation in metagenomic data' in which he outlined some new algorithms to assess evolutionary change from metagenomic data.

After tea, Wally Gilks and Elisa Loza (Rothamsted Research) presented their work on quantifying diversity and abundance in soil microbial communities from high-throughput sequence data, in particular describing an algorithm for estimating abundance of bacterial groups in the context of soil samples from the Rothamsted Classical Experiments. The afternoon was rounded off by a discussion led by David Balding, and this was surprisingly lively after such a long day.

My thanks to all the speakers, who did an excellent job in keeping their talks accessible to a broad audience while effectively communicating some new ideas in the field. ■

## MEETING REPORT

# Advances in animal movement: November 2011

James Carpenter

Many years ago, there was a Mathematical Ecology Working Group which linked the BIR and the British Ecological Society, and led to a number of successful meetings. This provided an impetus for the November meeting, the region's first with the British Ecological Society for at least 10 years. It was also our first meeting at the Institute of Biology's building in London, Charles Darwin House.

Around 80 people participated in what proved to be a most stimulating day. The opening tutorial, by Roland Langrock (St Andrews) was admirably clear and a very helpful introduction to the rest of the day for those of us unfamiliar with animal movement data. This was followed up by Ruth King (St Andrews) who described a Bayesian data augmentation algorithm for modelling un-



equally spaced observations from grey seal tracking, and also a hidden Markov model for modelling bison movement. Adam Butler (BioSS) then presented the analysis of tracking data from the admirably named 'FAME' project (Future of the Atlantic Marine Environment). This important work seeks to identify the areas in which seabirds forage, in order to assist with identifying key areas for marine conservation.

After lunch Paul Blackwell (Sheffield) described switching diffusion models, with application to data on wild boar, and fitted using intricate new MCMC methods. Of interest to Jason Matthiopoulos (St Andrews) was the movement of Southern elephant seals, for which movement had the extra complication of a third dimension. David

Sims (Marine Biological Association) described Levy flight models, with reference to blue sharks, basking sharks, jellyfish and young albatrosses. Robin Freeman (Microsoft) illustrated research on the routes taken by birds, and how these relate to topographical characteristics of the land covered. The meeting concluded with a talk by Paul Moorcroft (Harvard), who spoke of the 'fire hose of data' now resulting from tracked wild animals. He described resource selection models and how these might link up with models for movement, as well as the integration of models of demography with models of space use.

Thanks to Byron Morgan and David Murrell of the British Ecological Society for organising a most stimulating meeting. ■

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## Strategic Initiative Project funded

James Carpenter

John Hinde and Byron Morgan, on behalf of the Region, have been awarded \$1500 from the International Society for a project to foster student members and encourage them to be fully integrated in the life of the region and broader society.

As part of this project, the region will establish within its new website a student members discussion forum with limited access. We will also survey student members and recent members about their experience of the region, and

how its activities and website can best help them. A second strand of the project will be to launch a new publicity and recruitment campaign, making use of social media.

Under the terms of the award, the region will report on progress to the IBS executive, who are interested to learn which initiatives would be appropriate to pursue at the international level.

Any member interested in assisting with this exciting project should email [john.hinde@nuigalway.ie](mailto:john.hinde@nuigalway.ie) ■

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### INTERNATIONAL SOCIETY NEWS

## Update on governance of International Society

James Carpenter

A number of you will know that the IBS has in principle agreed to move to a new governance structure, with new executive board—directly elected by members—managing the day-to-day life of the IBS and a representative council, whose members are elected by the regions. This replaces the current, smaller executive committee which has to refer most of its decisions to the current Council. In anticipation of this, the BIR elected three members to serve on the new representative council at the 2010 AGM.

However, although the current Council has recently approved the bylaw changes associated with our new gov-

ernance structure, there have been a number of concerns about the way the transition has been managed.

In the light of this, the IBS has asked two senior members of the German Region to review the process and advise on the next steps in the transition. It is hoped they will report in January 2012.

Currently, the IBS is therefore being run under the existing structures. It is likely that elections for the new Executive Board will take place in late Spring 2012, with the new board meeting for the first time in Kobe. The final step in approving the new structure will be a members' vote, also currently scheduled for Kobe. Another reason to attend the next IBC! ■

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## In Brief

### Summer meeting 2012

Plans are in hand for this meeting, which will have a sports theme (including drug testing). We are hoping to hold this at the Medway campus of the University of Kent, and include a tour of the sports science research facility.

### Presidential Address 2012

John Hind's presidential address in November 2012 will focus on recent developments in generalised linear models,

marking 40 years since the landmark paper by Nelder and Wedderburn.

### Eastern Mediterranean Region Conference, 2013

The 7th conference of the Eastern Mediterranean Region will take place in Tel Aviv, Isreal, from 22–25 April 2013. Highlights include a gala dinner in Jaffa and a half day trip to Jerusalem!

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Copy Deadline for Spring issue: Monday March 15th  
Production: James Carpenter

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Happy Christmas and Best Wishes for 2012



## International Biometric Society, British and Irish Region

RENEWAL OF MEMBERSHIP for ..... (name)

MEMBERSHIP CATEGORY: Please check

FULL member ☐ (Annual Subscription 40 pounds sterling) Full benefits of the Society including electronic subscription to Biometrics, Journal of Agricultural, Biological, and Environmental Statistics (JABES) and the Biometric Bulletin, voting privileges and the right to hold elective office.

RETIRED member ☐ (Annual Subscription 20 pounds sterling) All the rights of Full Membership. The retired category is open to anyone who has been a member for at least 10 years, and who is no longer in paid employment (working less than 0.2FTE).

Members have the options of receiving paper copies of the journals. Please check if applicable:

Biometrics and  
Biometric Bulletin  
£7 extra

☐

JABES and Biometric  
Bulletin £7 extra

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Biometrics, JABES and  
Biometric Bulletin  
£14 extra

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Please detail any changes to contact details here:

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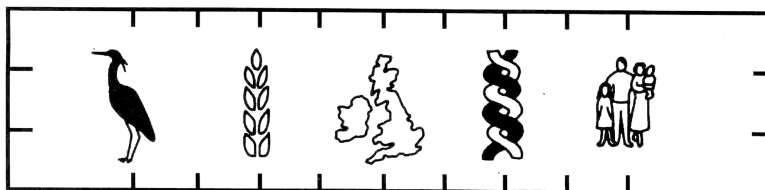
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Fax

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Please send this form with a cheque made payable to 'BIOMETRIC SOCIETY' to Mark Brewer, BioSS Office, The James Hutton Institute, Craigiebuckler, ABERDEEN, AB15 8QH, Scotland, UK.



## International Biometric Society, British and Irish Region

### APPLICATION FOR STUDENT MEMBERSHIP.

The subscription for student membership of the International Biometric Society, British and Irish Region is FREE. It includes electronic subscription to Biometrics, Journal of Agricultural, Biological, and Environmental Statistics (JABES) and the Biometric Bulletin. However as a student member you do not have voting privileges and cannot hold elective office.

Name	_____	Title	_____
Department	_____		
Organization	_____		
Address	_____		
	_____		
Telephone	_____		
Email	_____		
Course	_____	(eg PhD in statistics)	
End date	_____	(date your course is due to end)	

Signature: ..... Date: .....

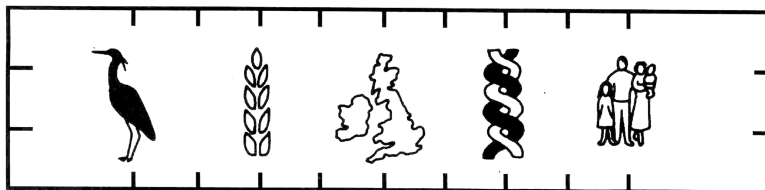
This form must be signed by your supervisor to certify that you are a full-time student.

Name of supervisor \_\_\_\_\_  
 Supervisor's signature \_\_\_\_\_  
 Date \_\_\_\_\_

**This form should be returned to Diana Cole, School of Mathematics, Statistics and Actuarial Science, University of Kent, Canterbury, Kent, CT2 7NF, UK.**

*As a student member you do not need to notify us each year. Your free student membership will end at the date given above, unless you inform us of an extension or continuation of your studies. Once you have finished your studies you can choose to upgrade your membership to full membership, by notifying Diana Cole ([d.j.cole@kent.ac.uk](mailto:d.j.cole@kent.ac.uk)) and by paying the full membership fee (currently £40).*





## International Biometric Society, British and Irish Region

### APPLICATION FOR FULL MEMBERSHIP

The annual subscription for full membership of the International Biometric Society, British and Irish Region is £40. It includes electronic subscription to *Biometrics*, *Journal of Agricultural, Biological, and Environmental Statistics* (JABES) and the *Biometric Bulletin*, voting privileges and the right to hold elective office.

Name	_____	Title	_____
Department	_____		
Organization	_____		
Address	_____		
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Email	_____		

### MEMBERSHIP CATEGORY: Please check

FULL member ☐ (Annual Subscription 40 pounds sterling) Full benefits of the Society including electronic subscription to *Biometrics*, *Journal of Agricultural, Biological, and Environmental Statistics* (JABES) and the *Biometric Bulletin*, voting privileges and the right to hold elective office.

Full members have the options of receiving paper copies of the journals. Please check if applicable:

*Biometrics* and  
*Biometric Bulletin*  
£7 extra

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JABES and *Biometric*  
*Bulletin* £7 extra

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*Biometrics*, JABES and  
*Biometric Bulletin*  
£14 extra

☐

Signature:.....

Date:.....

This form should be returned with a cheque made payable to 'BIOMETRIC SOCIETY' for the appropriate amount to: Mark Brewer, BioSS Office, The James Hutton Institute, Craigiebuckler, ABERDEEN, AB15 8QH

### Notes:

Please note that the membership year runs from 1<sup>st</sup> January to 31<sup>st</sup> December.

Applications dated on or before 30<sup>th</sup> September will be assumed to be for the current year (unless specified otherwise).

For applications dated on or after 1<sup>st</sup> October, please indicate (by circling the required option) whether you wish you membership to:

- (a) be backdated to the 1<sup>st</sup> January of the current year
- (b) start on 1<sup>st</sup> January of next year