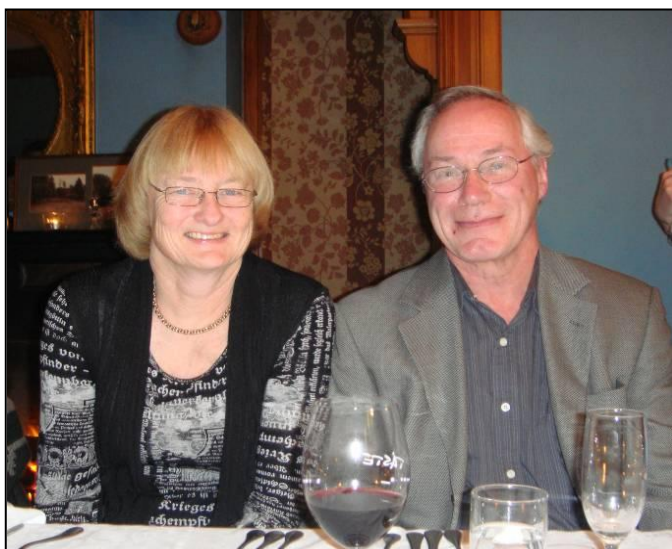


ASSOCIATE PROFESSOR IAN COOPE'S RETIREMENT DINNER



Present and former colleagues from Christchurch and further afield gathered at Riccarton House this month for a very enjoyable function to acknowledge Ian Coope's 31 years of service to this department. Ian will be continuing his association with the department in his new capacity as an Adjunct Associate Professor.

CONGRATULATIONS!

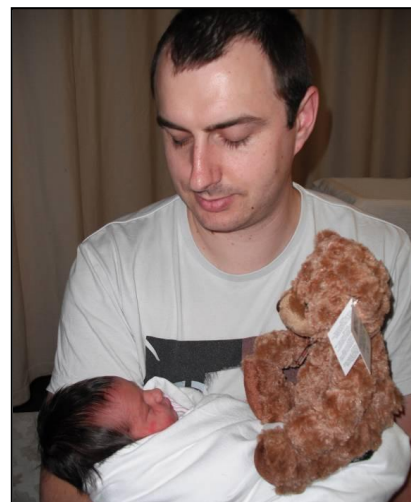


Jessica Emma Brouwers b. 30 June 2010

“Thank you to everyone in the department for their messages of support, gift and baby clothes. Angela and I are most appreciative.

Jessica is doing well and we’re relishing our new roles as her parents.”

- Paul Brouwers



David Wall reports that our former PhD student **Ronald Begg**, whose current postdoctoral fellowship at the University of Waterloo, Canada, will end soon, has just obtained another postdoc position at the University of Edinburgh, Scotland, commencing in October.

Congratulations to **Ewan Orr**, who has successfully defended his PhD Thesis entitled *Evolving Turing’s Artificial Neural Networks*, which was jointly supervised by Ben Martin (Mathematics), Jack Copeland (Philosophy) and Mike Reid (Physics).

Phil Wilson has been awarded the Postgraduate Certificate in Tertiary Teaching by the University of Canterbury.

WELCOME TO OUR DEPARTMENT VISITORS

<u>Visitor</u>	<u>Organization</u>	<u>Host</u>	<u>From</u>	<u>To</u>	<u>Room</u>	<u>Extn</u>
Hans Feichtinger (Erskine)	Vienna University	Q Bui	8/7/10	29/8/10	607	8875
Tommaso Proietti (Erskine)	Rome University	M Reale	9/7/10	22/8/10	620	7431
Lisa Carbone (Erskine)	Rutgers University	B Martin	9/7/10	23/8/10	605	8028
Konstantin Mischaikow (Erskine)	Rutgers University	B Martin	9/7/10	23/8/10	605	8028
Trent McDonald	WEST Inc.	J Brown	10/7/10	20/8/10	607	8875
Koen Struyve	Ghent University	G Steinke	10/7/10	17/8/10	720	8337

Feodor Lynen Award

The Alexander von Humboldt Fellowship has awarded **Professor Sebastian Boecker** a six-month Foeder Lynen Fellowship to visit us from 1 October 2010 to 30 March 2011. Sebastian Boecker is a mathematician who now heads a bioinformatics group in Jena, Germany. He will be visiting New Zealand with his wife and young son.

The Feodor Lynen Fellowship is awarded for a German scientist to visit the group of a former Alexander von Humboldt Research Fellow (Mike Steel) and pays 75% of his German salary, with the balance being covered, in this case, via Allan Wilson Centre funding.

- Mike Steel

ERSKINE FELLOWS



Lisa Carbone, who is here on a joint visiting Erskine Fellowship with Konstantin Mischaikow, is an Associate Professor of Mathematics at Rutgers University. Her major research interests are automorphisms of trees, lattices, Kac-Moody groups, and applications to high-energy physics. During her time here (9 July to 23 August) she will be lecturing on discrete mathematics/algebra underlying cryptography in MATH324/409. Her host is Ben Martin and she is based in Room 605, extn 8028.



Hans Feichtinger is a noted harmonic analyst whose publications have had a strong influence in the field. Professor Feichtinger is currently the Editor-in-Chief of the Journal of Fourier Analysis and Applications and is also the Leader of the Numerical and Harmonic Analysis Group at the University of Vienna. During his time here (8 July to 29 August) he will be lecturing on Fourier transformations and distribution theory to MATH425 and complex variables to MATH342. He is based in Room 607, extn 8875 and hosted by Qui Bui.

Konstantin Mischaikow, who is here on a joint visiting Erskine Fellowship with Lisa Carbone, is a Professor of Mathematics at Rutgers University. His special interests are dynamical systems, computational homology and dynamics and mathematical biology. He is also Editor-in-Chief of the Journal of Differential Equations. Professor Mischaikow is teaching mathematics of dynamical systems and their applications in MATH363-S2. His host is Ben Martin and he is based in Room 605 (extn 8028).



Tommaso Proietti is a Professor of Statistics at the University of Rome whose special fields of interest are time series analysis, forecasting and seasonal adjustment. Professor Proietti, who is here until 22 August, is lecturing on definition of times series and their sampling properties, seasonal adjustment and ARIMA models to STAT317 and STAT318. He is hosted by Jennifer Brown and Marco Reale and is based in Room 620 (extn 7431)



Recent visitor Peter Olsson living life on the edge in Queenstown. (Photo courtesy of David Wall)

Message from Beata Faller

“Dear All

Two weeks ago I arrived safely to Budapest. First I had two great weeks with family and friends, and since yesterday (4 July) I am a visitor at the Renyi Institute for three months. I will then start my postdoc in October. I hope you are all well and that the winter in Christchurch is not too cold. I have to admit that I really miss it. I am sorry for not saying goodbye to many of you. My last days at Canterbury were quite busy so hopefully you understand it. I wish you all the best and hope to hear from you in the future. If you are travelling to Budapest, please let me know!
Kind regards, Beata”

CONFERENCES & VISITS

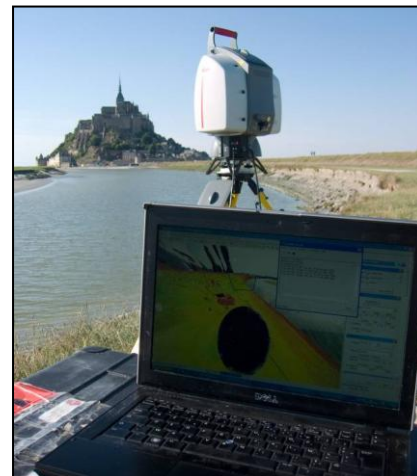
James Degnan will be visiting Elizabeth Allman and John Rhodes (a recent Erskine visitor) at the University of Alaska Fairbanks and Luay Nakhley at Rice University, Texas, from 23 August – 10 September.

Phil Wilson recently returned from a fortnight in London funded by a Departmental Research Initiative. While there, he worked on two projects, one of which involves a UCL-based MSc student. That project aims to model lipid raft formation in biological cells using a combination of lattice-boltzman numerical methods and larger length scale free-energy modelling of coagulation and fragmentation. The second project concerns aspects of granular flow, with particular relevance to phenomena such as ship slamming, tobogganing and thrombosis.

Igor Rychov presented a paper at the Curves and Surfaces Conference in Avignon at the end of June, followed by a visit to a geology group at the University of Rennes, where, amongst other things, he was involved in scanning the situation around Mont Saint Michel.



Igor's conference venue in Avignon, France



Scanning around Mont Saint Michel

Mike Steel spent 20 days in June-July in US/Europe giving talks at the annual Evolution meeting in Oregon, which had a record 1,900 participants, and at the Society for Molecular Biology and Evolution annual conference in Lyon, which also had a record 1,100 participants despite the 500 Euro registration fee. Other places visited included Bielefeld, Amsterdam, Grenoble (for a PhD defence) and Tübingen.

Workshop on Computational Homology and Dynamics: Friday 13 August – Sunday 15 August

Department of Mathematics & Statistics, University of Canterbury

Organiser: Konstantin Mischaikow (Erskine Fellow)

Local organisers: Rua Murray, Mike Plank, Ben Martin

The workshop will be on theory, methods and applications of computational homology to problems in dynamical systems. The main emphasis will be on nonlinear dynamics, but from a topological and combinatorial framework. Examples of applications to topics from Biology, Materials Science, Fluid Flow, and Granular Flow will be given, depending on the interests of the participants.

While everyone interested in the subject is invited to attend, the lectures are aimed at upper level undergraduates and beginning graduate students. The first few lectures will provide basic introductions to dynamics and algebraic topology and the later lectures will build on these ideas to demonstrate how they can be used both theoretically and computationally.

- Ben Martin

PAPERS SUBMITTED

Brown, R.G., Chase, J.G. & Hann, C.E.: *A Pointwise Smooth Surface Stereo Reconstruction Algorithm without Correspondence* (submitted to Image and Vision Computing)

Yu, Y., Than, C., Degnan, J.H. & Nakhleh, L.: *Coalescent Histories on Phylogenetic Networks and Detection of Hybridization despite Incomplete Lineage Sorting*

PAPERS ACCEPTED

Allman, E.S., Degnan, J.H. & Rhodes, J.A.: *Identifying the Rooted Species Tree from the Distribution of Unrooted Gene Trees under the Coalescent* (Journal of Mathematical Biology).

SNAPSHOTS FROM ABROAD



Irene David giving a well-received presentation on the multi-tasking ability of UC students at the International Conference on Teaching Statistics, Slovenia.



Jennifer Brown out in the field with Laurent Tatin, searching for grasshoppers at the Crau Reserve in France.



From Douglas Bridges come these beautiful photos (L to R) of punting on the Cam in England and a country chapel with the Karwendelgebirge in the background, above Mittenwald, Bavaria. The photos were taken when Douglas and Viv were enjoying some R & R during his recent research trip to Europe.