

OPSPA14

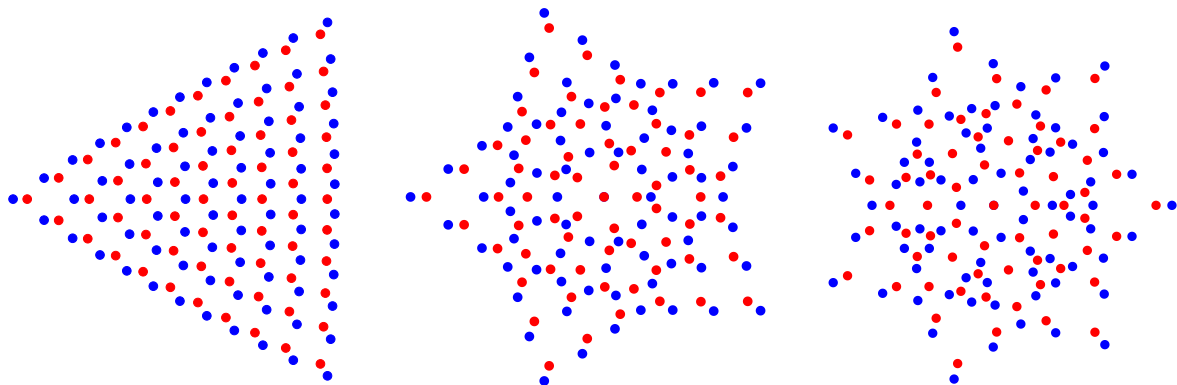
The 14th International Symposium on

Orthogonal Polynomials, Special Functions and Applications

3rd–7th July 2017

School of Mathematics, Statistics & Actuarial Science
Sibson Building, Parkwood Road
University of Kent
Canterbury, CT2 7FS, UK

Information Booklet



University of
Kent

Welcome to the 14th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA14), organised by the School of Mathematics, Statistics and Actuarial Science at the University of Kent, Canterbury, UK. The conference is the 14th event in the OPSFA series, with the first meeting held in Bar-Le-Duc, France in 1984, and is the first one to take place in the UK.

Conferences in the OPSFA series provide a forum for mathematicians, physicists, computational scientists, and applied scientists in other fields to communicate recent research results in the areas of orthogonal polynomials and special functions, which play an essential role in analytical and computational investigations in applied mathematics.

This symposium is an event of the SIAM Activity Group on Orthogonal Polynomials and Special Functions (SIAG/OPSF), which was founded in 1990, under the leadership of Charles Dunkl. The activity group promotes basic research in orthogonal polynomials and special functions; further the application of this subject in other parts of mathematics, and in science and industry. It also encourages and supports the exchange of information, ideas, and techniques between workers in this field and other mathematicians and scientists. The activity group's newsletter (math.nist.gov/opsf) has appeared since 1993. The activity group also awards the Gábor Szegő Prize (which was launched in 2010, thanks to then SIAG/OPSF chair Paco Marcellán) every two years to an early-career researcher for outstanding research contributions in the area of orthogonal polynomials and special functions.

We have put together a programme of plenary talks which reflects recent developments in orthogonal polynomials and special functions such as the influence of integrable systems, random matrices and Riemann-Hilbert problems.

We hope you enjoy the conference, the interactions with other participants and have an opportunity to see some of the historic cathedral city of Canterbury, which is a UNESCO World Heritage Site.

We thank the scientific committee, in particular Walter Van Assche, for their assistance in putting together the programme for the conference. We thank the local organising committee, together with Derek Baldwin, Louisa Harvey and Amy Ward for their help with the organisation of the conference. We also thank our sponsors, who are listed below.

Peter Clarkson and Ana Loureiro

Sponsors

Cambridge University Press
Institute of Physics, UK
Institute of Mathematics and its Applications, UK
London Mathematical Society
Society for Industrial and Applied Mathematics
University of Kent



Letter from the Head of School

A warm welcome

As Head of the School of Mathematics, Statistics and Actuarial Science (SMSAS), it is a pleasure to welcome you to Kent. I hope that you will really enjoy your time in Canterbury. If you can, take time to stroll around the beautiful old city centre or go on a tour; there's a wealth of history to be seen.

OPSFA14 is first of the OPSFA conferences to be held in the UK, making it something of a landmark. Peter Clarkson, Ana Loureiro and their colleagues on the Scientific and Organising Committees have put together an outstanding programme that spans a very broad range of topics. I'm sure that you will find the conference stimulating and will gain new insights from the talks and from working with one another.

This year, SMSAS moved into the purpose-built Sibson building, which has been designed with mathematics in mind. OPSFA14 is the inaugural mathematics conference in our new home; I would welcome your comments on its facilities. Please do make use of the study areas and meeting rooms that are scattered around the School.

I hope that you will leave OPSFA14 refreshed, having had many more worthwhile ideas than you can possibly pursue, and will come back to visit us again before too long.

With my best wishes for an excellent meeting,

Peter Hydon
Head of SMSAS



The Sibson Building

Committees

Scientific Committee

Alexander Aptekarev (Keldysh Institute, Moscow, Russia)
Peter Clarkson (University of Kent, UK, chair)
Bernd Beckermann (Université de Lille, France)
Diego Dominici (SUNY New Platz, USA)
Jeff Geronimo (Georgia Institute of Technology, Atlanta, USA)
Kerstin Jordaan (University of South Africa, Pretoria, South Africa)
Nalini Joshi (University of Sydney, Australia)
Erik Koelink (Radboud Universiteit Nijmegen, The Netherlands)
Ana Loureiro (University of Kent, UK)
Dan Lozier (NIST, Gaithersburg, USA)
Andrei Martínez-Finkelshtein (Universidad de Almería, Spain)
Adri Olde Daalhuis (University of Edinburgh, UK)
Beatrice Pelloni (Heriot-Watt University, UK)
Walter Van Assche (University of Leuven, Belgium)

Local Organising Committee



Claire Carter



Peter Clarkson (Chair)



Alfredo Deaño



Peter Hydon



Ana Loureiro



Elizabeth Mansfield



John Pearson



Ian Wood

Information

Registration

Registration will take place 14:00–20:00 on Sunday 2nd July in Turing College, where those who have accommodation on campus are staying, and 08:00–09:30 on Monday 3rd July in the Atrium in the Sibson building, where the conference is taking place. The registration desk will also be open 08:30–09:00 each day during the remainder of the conference in the Sibson Atrium.

Conference Venue

The conference take place at Sibson Building (C2 on the campus map):

Sibson Building
Parkwood Road
University of Kent
Canterbury, CT2 7FS

Floor plans for the ground and first floors of the Sibson building

Lower ground and ground floor plans



First floor plan



Accommodation

If you have booked campus accommodation all rooms are located in **Turing College**.

- Check-in is from 14:00 on your day of arrival and check-out is by 10:00 on your day of departure. Please visit Turing Reception (N7 on the campus map) upon your arrival to collect your room keys.
- Turing Reception will be open from 08:00 to 22:00 daily. If you are due to check-in to your accommodation after reception has closed you will need to contact Campus Security upon your arrival who will open reception. An internal phone is available outside reception to dial through to our 24hr security team.
- Bedrooms are serviced daily and provided with towels, linen and complimentary toiletries. Tea and coffee making facilities are also provided.
- Delegates are asked to familiarise themselves with the University's evacuation procedures, which are displayed on the back of the door in each bedroom.
- Breakfast is provided in Hut 8, Turing College between 07:45 and 09:30 and you will be required to show your room key to prove residency.

Plenary Lectures

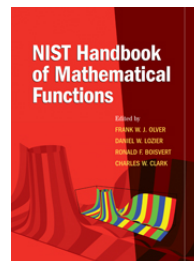
All the plenary lectures will take place in Sibson Lecture Theatre 3, on the first floor of the Sibson building.

Contributed Talks

The contributed talks will take place in three or four parallel sessions. These will take place in Seminar Room 2 (on the ground floor of the Sibson building), and Seminar Room 4, 5, 6 (on the first floor of the Sibson building).

Posters

The poster session will take place in the Atrium of the Sibson building during Monday 3rd July and Tuesday 4th July. There are prizes for the best two posters at OPSFA14 which will be announced during the Conference Dinner on Thursday 6th July. The prizes, which are copies of the “*NIST Handbook of Mathematical Functions*” [Edited by Frank W.J. Olver, Daniel W. Lozier, Ronald F. Boisvert and Charles W. Clark], are sponsored by Cambridge University Press.



Coffee Breaks & Lunch

Coffee and tea breaks will take place in the Sibson Atrium throughout the conference. Lunch will be served in the Sibson Atrium throughout the conference.

Evening meals

Evening meals are not included in the registration fee. There are numerous restaurants and pubs in the city of Canterbury; see the list of restaurants and pubs.

There are also various catering options on campus, see www.kent.ac.uk/catering for details. The opening times of catering outlets on campus during the conference are given here.

Welcome Reception – Monday 3rd July

On Monday 3rd July there will be a welcome reception in the Sibson Atrium starting at 18:00.

Public Lecture – Tuesday 4th July

On Tuesday 4th July, Andrei Martínez-Finkelshtein (Universidad de Almería, Spain) will give a Public Lecture “*Math is in the eye of the beholder*”, starting at 18:15 in Sibson Lecture Theatre 3, on the first floor of the Sibson building.

Optional Conference Tours – Wednesday 5th July

We have arranged for tours to take place from 14:30 on Wednesday of either Canterbury Cathedral or a walking tour of Canterbury. Places are still available to book on either of these tours so please contact Louisa Harvey (L.M.Harvey@kent.ac.uk) if you would like to attend.

Conference Dinner – Thursday 6th July

The conference dinner will take place on Thursday 6th July in the Darwin Conference Suite, which is on the ground floor of Darwin College, University of Kent. Pre-dinner drinks will be served from 19:30 with dinner at 20:00.

Sibson Café

The Sibson Café is located on the ground floor of the Sibson building, which is open 09:00–15:00 during the conference. A range of hot and cold drinks, sandwiches, salads and snacks are available for purchase.

Internet Access

Wireless zones are available in teaching and social areas on campus. It is a condition of connecting to the internet using the Kent network that all laptops should be running current anti-virus software and the latest security updates.

Use the University of Kent WiFi service **eduroam** if you are from an **eduroam** institution. Delegates are not from an **eduroam** institution will be supplied with a computer log-in in order to access the internet during their stay. Log-ins and instructions (for the University network) will be supplied during registration. Alternatively, anyone can pick up WiFi Guest, free public WiFi provided by The Cloud, on campus.

How to get on visitor WiFi:

- find WiFi Guest in your list of available WiFi networks and select it;
- log in, or register if you're a first time user, to gain internet access.

Smoking

The University operates a non-smoking policy in all areas.

Messages

Between the hours of 09:00 and 17:00 (BST) messages for delegates can be left with the Conference team on +44 (0)1227 828000 or the SMSAS General Office +44 (0)1227 827181. Outside of these hours urgent messages only can be left with Campus Security on +44 (0)1227 823300

Campus facilities

Set in over 450 acres of beautiful parkland overlooking the historical city of Canterbury, the University of Kent campus provides a perfect location for conferences and events guests. We have a wide range of award-winning restaurants and bars, a cinema, theatre, shops, banking, as well as a gym and outdoor sports facilities.

The campus has an outdoor Labyrinth (see photo, right), which has a wonderful view of the city and is located close to Eliot College. Details are given here



Historic and Cosmopolitan Canterbury

The University of Kent campus is just a 20 minute walk (there is a path down the hill near Eliot College) or short bus journey into the city. Canterbury has something for everyone to enjoy – whether you want to take a boat ride on the River Stour, shop 'til you drop at big name stores and independent boutiques or sample some of the local culinary delights in award-winning restaurants and bars. The Lonely Planet guide to Britain says “Many consider the World Heritage-listed cathedral that dominates its centre to be one of Europe’s finest, and the town’s narrow medieval alleyways, riverside gardens and ancient city walls are a joy to explore”.

Tourist Information about Canterbury is available at www.canterbury.co.uk/tourist-information

A map of Canterbury can be downloaded here.

A map of Canterbury City Centre can be downloaded here.

A guide to top attractions in Canterbury, including a map, can be downloaded here.

Taxis

Local taxi companies include:

- Cabco Taxis, Tel: +44 (0)1227 455455 [Mobile phone App available]
- Cabline Taxis, Tel: +44 (0)1227 555555 [Mobile phone App available]
- Canterbury Taxis, Tel: +44 (0)1227 444444
- City Cars, Tel: +44 (0)1227 454445
- Longley’s Private Hire, Tel: +44 (0)1227 710777 [Mobile phone App available]
- Wilkinson Taxis, Tel: +44 (0)1227 450450

Health/Medical Insurance

Delegates are advised to ensure that they have adequate medical insurance to cover the period of their stay in the United Kingdom.

Electrical Voltage

United Kingdom standard voltage is 240v, with square three-pin plugs — you may need to have an adaptor with you.



Gábor Szegő Prize

The SIAM Activity Group on Orthogonal Polynomials and Special Functions (SIAG/OPSF) awards the Gábor Szegő Prize every two years to an early-career researcher for outstanding research contributions, as determined by the prize committee, in the area of orthogonal polynomials and special functions. The contributions must be contained in a paper or papers published in English in peer-reviewed journals.

The Gábor Szegő prize is intended for an early career researcher. The prize can only be awarded to a researcher who has at most 10 years (full time equivalent) of involvement in mathematics since PhD at the award date, allowing for breaks in continuity, or who in the opinion of the prize committee is at an equivalent stage in their career.

Gábor Szegő Prize Winners

- 2011 Tom Claeys
- 2013 Jacob Stordal Christiansen
- 2015 Karl Liechty
- 2017 Thomas Trogdon

Gábor Szegő Prize Selection Committee 2017

- Kerstin Jordaan (University of South Africa, Pretoria, South Africa, Chair)
- Andrei Martínez-Finkelshtein (Universidad de Almería, Spain)
- Adri Olde Daalhuis (University of Edinburgh, UK)
- Yuan Xu (University of Oregon, USA)

Special Issue of SIGMA on OPSFA14

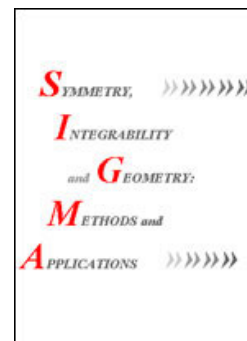
The journal *Symmetry, Integrability and Geometry: Methods and Applications* (SIGMA) will publish a special issue related to OPSFA14. The papers in the special issue will highlight the latest developments in the field of Orthogonal Polynomials and Special Functions.

Papers from the participants and from other authors whose work fits into the field are welcome for this issue. For this issue, both original research articles and review papers are welcome. There are no paper length limits for the submitted works. Deadline for the submission is **31st January 2018**.

The Guest Editors for this special issue of SIGMA are:

- Peter Clarkson (University of Kent, Canterbury, UK);
- Erik Koelink (Radboud University Nijmegen, The Netherlands);
- Ana Loureiro (University of Kent, Canterbury, UK);
- Walter Van Assche (University of Leuven, Belgium).

For details on how to submit a manuscript to the special issue, see www.emis.de/journals/SIGMA/OPSFA2017.html



SIAM Activity Group on Orthogonal Polynomials and Special Functions

The SIAM Activity Group on Orthogonal Polynomials and Special Functions consists of a broad set of mathematicians, both pure and applied. The Group also includes engineers and scientists, students as well as experts. We have 176 members (as of October 20, 2016) scattered about in 30 countries. Whatever your specialty might be, your participation in this classical, and yet modern, topic is welcomed. The home page is: math.nist.gov/opsf. This is a convenient point of entry to all the services provided by the Group. The Webmaster is Bonita Saunders (bonita.saunders@nist.gov).

The Activity Group sponsors OP SF NET, an electronic newsletter, and SIAM OPSF (OP SF Talk), a listserv, as a free public service; membership in SIAM is not required. OP SF NET is transmitted periodically through a post to OP SF Talk. The OP SF Net Editors are Howard Cohl (howard.cohl@nist.gov), and Sarah Post (spost@hawaii.edu). Back issues of OP SF NET can be obtained at the website: staff.fnwi.uva.nl/t.h.koornwinder/opsfnet

SIAM OPSF (OP SF Talk), which was recently moved to a SIAM server, facilitates communication among members and friends of the Activity Group. To subscribe, go to lists.siam.org/mailman/listinfo/siam-OPSF and follow the instructions under the sub-heading "Subscribing to SIAM OPSF". To contribute an item to the discussion, send e mail to siam-opsf@siam.org. The moderators are Bonita Saunders (bonita.saunders@nist.gov) and Diego Dominici (dominidc@newpaltz.edu).

SIAM has several categories of membership, including low-cost categories for students and residents of developing countries. In addition, there is the possibility of reduced rate membership for the members of several societies with which SIAM has a reciprocity agreement; see www.siam.org/membership/individual/reciprocal.php. For current information on SIAM and Activity Group membership, contact:

Society for Industrial and Applied Mathematics
3600 University City Science Center
Philadelphia, PA 19104-2688 USA
phone: +1-215-382-9800
Email: service@siam.org
WWW: www.siam.org

The elected officers of the OPSF Activity Group (2017–2019) are:

Walter Van Assche (University of Leuven, Belgium), Chair
Andrei Martínez-Finkelshtein (Universidad de Almería, Spain), Vice Chair
Sarah Post (University of Hawaii, USA), Program Director
Yuan Xu (University of Oregon, USA), Secretary

The appointed officers of the OPSF Activity Group are:

Howard Cohl (NIST, USA), OP SF NET co-editor
Sarah Post (University of Hawaii, USA), OP SF NET co-editor
Diego Dominici (SUNY New Platz, USA), OP SF Talk moderator
Bonita Saunders (NIST, USA), Webmaster and OP SF Talk moderator

Previous OPSFA Conferences

OPSFA1	Bar-le-Duc, France	15–18 October 1984
OPSFA2	Segovia, Spain	22–27 September 1986
OPSFA3	Erice, Sicily, Italy	31 May–9 June 1990
OPSFA4	Evian-Les-Bains, France	19–23 October 1992
OPSFA5	Patras, Greece	20–24 September 1999
OPSFA6	Rome, Italy	18–22 June 2001
OPSFA7	Copenhagen, Denmark	18–22 August 2003
OPSFA8	München, Germany	25–30 July 2005
OPSFA9	Luminy, France	2–6 July 2007
OPSFA10	Leuven, Belgium	20–25 July 2009
OPSFA11	Leganés, Madrid, Spain	29 August–2 September 2011
OPSFA12	Sousse, Tunisia	25–29 March 2013
OPSFA13	Gaithersburg, Maryland, USA	1–5 June 2015

Pubs & Restaurants in Canterbury

Restaurants

There are a number of independent restaurants in Canterbury. Here are a selection:

- **The Ambrette**, 14-15 Beer Cart Lane, Canterbury. CT1 2NY +44 (0)1227 200 777
Website: theambrette.co.uk
- **The Ancient Raj**, 25-26 North Lane, Canterbury, CT2 7EE, Tel: +44 (0)1227 455882
Website: www.ancient-raj.com
- **Chapman's Restaurant**, 89 St Dunstons Street, Canterbury, CT2 8AD, Tel: +44 (0)1227 780749
Website: www.chapmanscantebury.co.uk
- **The Corner House**, 1 Dover Street, Canterbury, CT1 3HD, +44 (0)122 780793
Website: www.cornerhouserestaurants.co.uk
- **Deeson's Restaurant**, 25-27 Sun Street, Canterbury, CT1 2HX, Tel: +44 (0)1227 767854
Website: www.deesonsrestaurant.co.uk
- **Café des Amis**, 95 St Dunstons Street, Canterbury, CT2 8AA, Tel: +44 (0)1227 464390
Website: www.cafedez.com
- **Café du Soleil**, 5 Pound Lane, Canterbury, CT2 8AA, Tel: +44 (0)1227 479999
Website: cafedusoleil.co.uk
- **Café Mauresque**, 8 Butchery Lane, Canterbury, CT1 2JR, Tel: +44 (0)1227 464300
Website: www.cafemauresque.co.uk
- **Il Posticino**, 61 Dover Street, Canterbury, CT1 3HD, Tel: +44 (0)1227 788022
Website: www.ilposticino.co.uk
- **Kashmir Tandoori**, 20 Palace St, Canterbury, CT1 2DZ, Tel: +44 (0)1227 462050
Website: kashmirtandoori.co.uk
- **Oscar & Bentleys**, 10 Guildhall Street, Canterbury, CT1 2JQ, Tel: +44 (0)1227 454544
Website: www.oscar-bentleys.co.uk
- **Pinocchio's**, 64 Castle Street, Canterbury, CT1 2PY, Tel: +44 (0)1227 457538
Website: www.pinocchioscantebury.com
- **Posillipo**, 16 The Borough, Canterbury, CT1 2DR, Tel: +44 (0)1227 761471
Website: posillipo.squarespace.com
- **Tamago**, 64 Northgate, Canterbury, CT1 1BB, +44 (0)1227 634537
Website: www.tamago.restaurant
- **Wild Goose, The Goods Shed**, Station Road West, Canterbury, CT2 8AN,
Tel: +44 (0)1227 459153, Website: thegoodsshed.co.uk

Chain restaurants

- **Ask**, 24 High Street, Canterbury, CT1 2AY, Tel: +44 (0)1227 767617
Website: www.askitalian.co.uk/restaurant/canterbury
- **Bill's** 5 Rose Lane, Whitefriars, Canterbury, CT1 2SJ, Tel: +44 (0)1227 479552
Website: bills-website.co.uk/restaurants/canterbury
- **Cote Brasserie**, 2 Longmarket, Parade, Canterbury, Tel: +44 (0)1227 CT1 2JS 786386
Website: www.cote-restaurants.co.uk/restaurant/details/canterbury
- **Nandos**, 46 St Peters Street, Canterbury, CT1 2BG, Tel: +44 (0)1227 766261
Website: www.nandos.co.uk
- **Pizza Express**, 4 Best Lane, Canterbury, CT1 2JB, Tel: +44 (0)1227 766 938
Website: www.pizzaexpress.com/canterbury
- **Prezzo**, 28 High Street, Canterbury, CT1 2BA, Tel: +44 (0)1227 379571
Website: www.prezzorestaurants.co.uk

Pubs

Canterbury has a number of pubs, there are about 30 pubs within the city walls (or where the wall would be if it still went all the way round), many of which also serve food. Here are a selection within and outside the city walls:

- ***Bishop's Finger***, 13 St Dunstons Street, Canterbury, CT2 8AF, Tel: +44 (0)1227 768915
Website: www.bishopsfingercanterbury.co.uk
- ***The City Arms***, 7 Butchery Lane, Canterbury, CT1 2JR, Tel: +44 (0)1227 458081
Website: www.thecityarmspub.co.uk
- ***The Cricketers***, 14 St Peters Street, Canterbury, CT1 2BQ, Tel: +44 (0)1227 464227
Website: www.cricketerscanterbury.co.uk
- ***The Dolphin***, 117 St Radigunds Street, Canterbury, CT1 2AA, Tel: +44 (0)1227 455963
Website: www.thedolphincanterbury.co.uk
- ***The Foundry Brew Pub***, White Horse Lane, Canterbury, CT1 2RU, Tel: +44 (0)1227 455899
Website: thefoundrycanterbury.co.uk
- ***The Lady Luck Pub***, 18 St Peters Street, Canterbury, CT1 2BQ, Tel: +44 (0)1227 763298
Website: theladyluck.co.uk
- ***The Parrot***, 1-9 Church Lane, St Radigans, Canterbury, CT1 2AG, Tel: +44 (0)1227 454170
Website: www.parrotcanterbury.co.uk
- ***The Shakespeare***, 5 Butchery Lane, Canterbury, CT1 2JR, Tel: +44 (0)1227 463252
Website: www.shakespearecanterbury.com
- ***The Three Tuns***, Watling St, Canterbury, Kent, CT1 2UD, Tel: +44 (0)1227 458014
Website: www.johnbarras.com/pub/three-tuns-canterbury/c7508
- ***Thomas Becket***, 21 Best Lane, Canterbury, CT1 2JB, Tel: +44 (0)1227 464384
- ***The Thomas Ingoldsby***, 5-9 Burgate, Canterbury, CT1 2HG, Tel: +44 (0)1227 463339
Website: www.jdwetherspoon.com/pubs/all-pubs/england/kent/the-thomas-ingoldsby-canterbury
- ***Unicorn Inn***, 61 St. Dunstons St, Canterbury CT2 8BS, Tel: +44 (0)1227 463187
Website: www.unicorninn.com
- ***West Gate Inn***, 1-3 North Lane, Canterbury CT2 7EB, Tel: +44 (0)1227 464329
Website: www.jdwetherspoon.com/pubs/all-pubs/england/kent/the-west-gate-inn-canterbury
- ***The White Hart***, Worthgate Place, Dane John Mews, Canterbury, CT1 2QX,
Tel: +44 (0)1227 765091 Website: www.whitehartcanterbury.co.uk
- ***Ye Olde Beverlie***, St Stephen's Green, Canterbury, CT2 7JU, Tel: +44 (0)1227 463974
Website: www.shepherdneame.co.uk/pubs/pubs.php/yeoldebeverlie.canterbury

FINDING YOUR WAY AROUND THE CAMPUS

