



45th IOP Plasma Physics Conference

9–12 April 2018

Queens University Belfast, Belfast, UK

Organised by the IOP Plasma Physics Group



45th IOP Plasma Physics Conference

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Contacts – Conferences team

Please read this handbook prior to the event as it includes all the information you will need while onsite at the conference. If you have any questions or require further information, please contact Priscilla Lim or the conferences team. The IOP Conferences team will be on-site for the duration of the event (see registration times) to answer any questions and to support the overall running of the event.

Priscilla Lim
Tel: +44 (0)20 7470 4910
Mobile: 07917384699
Email: priscilla.lim@iop.org

Conferences team
Email: conferences@iop.org

If you encounter any problems at the conference, please report them to the conferences team who will make every effort to rectify the issues as soon as possible.

Organised by the IOP Plasma Physics Group
Sponsored by the IOP Computational Physics Group

Sponsors



Science & Technology Facilities Council

Central Laser Facility



Organising committee

Professor William Graham (PPG Chair), Queens University Belfast
Professor David Riley (**2018 local organiser**), Queens University Belfast
Dr Josephine Coltman (PPG Secretary), AWE Plc
Dr Ceri Brenner (PPG Treasurer), Rutherford Appleton Laboratory
Dr Ioannis Kourakis (local), Queens University Belfast
Dr Satya Kar (local), Queens University Belfast
Dr Benjamin Dudson, University of York
Dr Bengt Eliasson, University of Strathclyde
Dr Bogdan Hnat, University of Warwick
Dr Felipe Iza, Loughborough University
Professor Paul Maguire, University of Ulster
Dr Andrew Thornton, Culham Centre for Fusion Energy
Mr Gregory Daly, Oxford Instruments Plasma Technology Ltd.
Dr Andrew Gibson, University of York
Dr Andrew Rossall, University of Huddersfield

Disclaimer

The Institute of Physics and Queens University Belfast accept no responsibility for any accident, loss or damage to participants or their property.





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Venue

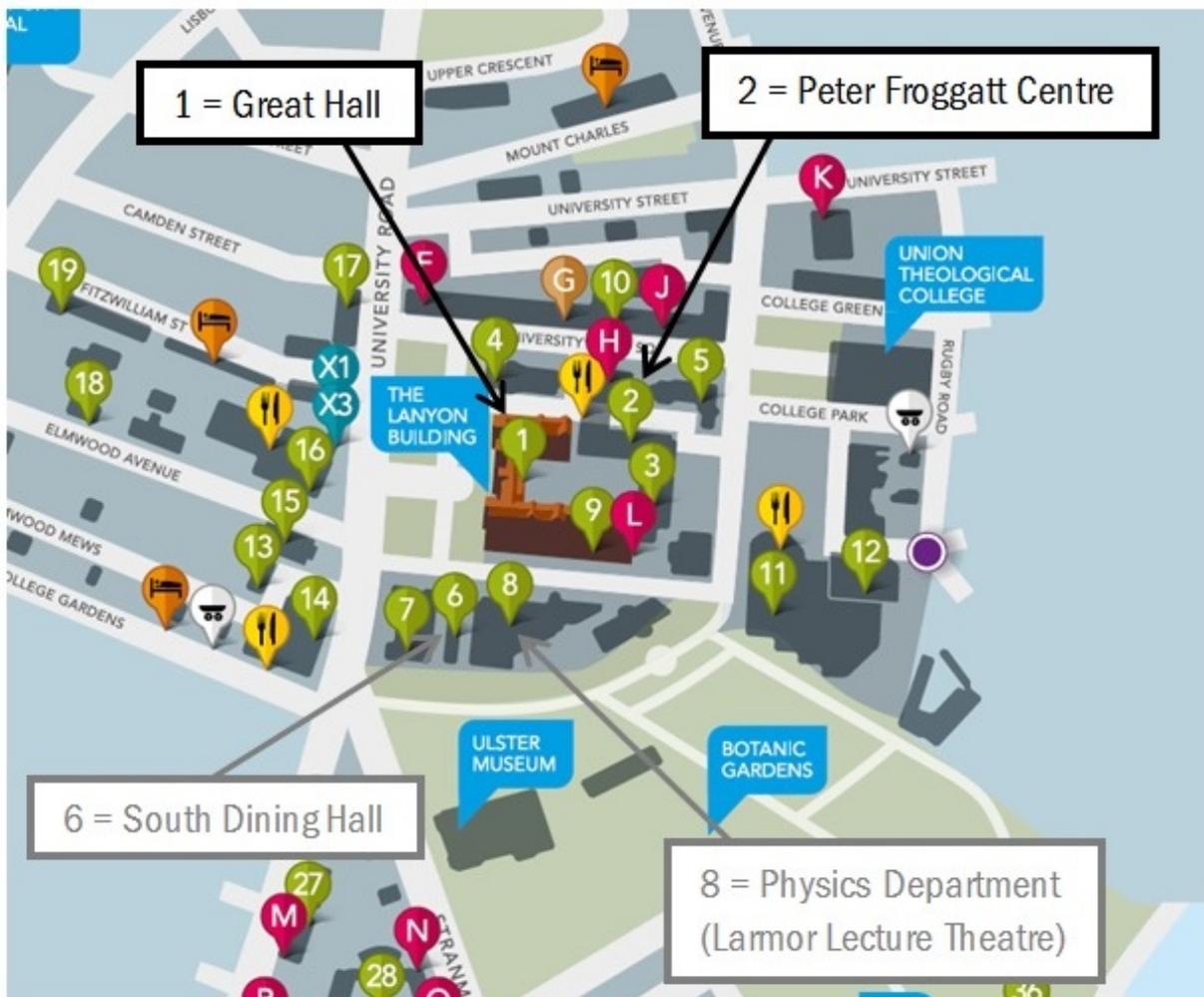
The conference will be held at Queens University Belfast in the **Peter Froggatt Centre** (2 on map).

*Due to unforeseen circumstances, the conference has moved to the **Peter Froggatt Centre**, QUB. There will no longer be any conference related activities taking place in the South Dining Hall or Larmor Lecture Theatre.*



Peter Froggatt Centre

Queen's University Belfast
University Rd
Belfast
BT7 1NN





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Programme

The full conference programme can be found online at <http://plasma2018.iopconfs.org/programme>

Monday 9 April		
11:00	Registration	Peter Froggatt Centre, QUB
12:00	Lunch	
13:00	Welcome and talks (1 Invited and 1 Contributed)	
14:10	Culham Thesis Prize Talk	
14:50	Refreshment break	
15:10	Talks (1 Invited and 2 Contributed)	
16:30	Rutherford Prize Talk	
16:50	Poster Introductions	
17:10	Posters, exhibition and refreshments	Great Hall, QUB
19:00	Welcome reception	

Tuesday 10 April		
09:00	Talks (2 Invited and 1 Contributed)	Peter Froggatt Centre, QUB
10:40	Refreshment break	
11:00	Talks (1 Invited and 3 Contributed)	
12:40	Lunch	
13:40	Excursion to Titanic Museum	
19:00	Evening Outreach Event	Peter Froggatt Centre, QUB

Wednesday 11 April		
09:00	Talks (1 Invited and 2 Contributed)	Peter Froggatt Centre, QUB
10:20	Refreshment break	
10:40	Talks (1 Invited and 2 Contributed)	
12:00	IOP Plasma Group AGM*	IRCEP board room
12:30	Lunch	Peter Froggatt Centre, QUB
13:30	Talks (1 Invited and 3 Contributed)	
15:10	Refreshment break	
15:30	Talks (2 Contributed)	
16:10	Poster Introductions	
16:30	Poster session and refreshments	
19:00	Reception at City Hall	Belfast City Hall
19:30	Conference Dinner at City Hall	

Thursday 12 April		
09:00	Talks (1 Invited and 3 Contributed)	Peter Froggatt Centre, QUB
10:40	Refreshment break	
11:00	Talks (1 Invited and 3 Contributed)	
12:40	Lunch and close	



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Registration

Registration will be held in the Peter Froggatt Centre at the times listed below. Each participant will receive a pen, pad, a printed copy of the programme and a lapel badge. The abstract book will be in digital format only and is available to download from the website.

Date	Time
Monday	11:00-18:30
Tuesday	08:30-13:30
Wednesday	08:30-18:30
Thursday	08:30-13:00

WiFi – The Cloud

Free WiFi is provided by 'The Cloud' or Eduroam for visitors from other participating universities. To access the cloud, please follow the instructions below.

1. Make sure your WiFi is turned on
2. Select 'The Cloud' from the available network list
3. Open your browser, hit refresh and follow the on-screen instructions to register or log-in
4. For auto-connection, download the Sky FastConnect app for iOS and Android.

Catering

The registration fee includes refreshments and lunch for the duration of the event and the social programme. All refreshments and lunch will be held in the Peter Froggatt Centre. Please refer to the table below for timings and location for the social programme.

Date	Event	Time	Location
Monday 9 April	Arrival refreshments	11:00-12:00	Peter Froggatt Centre
	Lunch	12:00-13:00	
	Refreshment break	14:50-15:10	
	Posters, exhibition and refreshments	17:10-19:00	
	Welcome reception	19:00	Great Hall, QUB
Tuesday 10 April	Refreshment break	10:40-11:00	Peter Froggatt Centre
	Lunch	12:40-13:40	
Wednesday 11 April	Refreshment break	10:20-10:40	Peter Froggatt Centre
	Lunch	12:30-13:30	
	Refreshment break	15:10-15:30	
	Poster session and refreshments	16:30-18:30	
	Reception at City Hall	19:00-19:30	Belfast City Hall
Conference Dinner at City Hall	19:30-late		
Thursday 12 April	Refreshment break	10:40-11:00	Peter Froggatt Centre
	Lunch	12:40-13:40	

Dietary requirements

Participants with dietary requirements are asked to notify the conference office by email prior to their arrival. Those with special dietary requirements other than vegetarian are asked to make themselves known to the catering team. It will not be possible to provide an alternative menu unless prior notification has been received. Please email priscilla.lim@iop.org if you have any questions.





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Social programme

Monday 9 April

An evening reception will be held on Monday 9 April, 19:30 in the Great Hall at Queens University Belfast, just a few minutes' walk from the Peter Froggatt Centre.

Designed by Charles Lanyon, the main building at Queen's University is one of the best loved buildings on this island, with the Lanyon silhouette used on tourist literature and on banknotes

Wednesday 11 April

The conference dinner will be held on Wednesday 11 April at Belfast City Hall.

A drinks reception will take place at 19:00, with the sit down dinner commencing at 19:30

Belfast City Hall is Belfast City Council's civic building. It is located in Donegall Square, in the heart of Belfast city centre. It first opened its doors on 1 August 1906.

We thank Belfast City Council for their kind generosity for the use of City Hall



Belfast
City Council

Excursion - Tuesday 10 April

Visit to Titanic Belfast and Nomadic (pre-booked only). Please note this is a self-guided experience. Multi media guides for Titanic Belfast only will be available for an additional cost of £2 per set.

- Start time: 13:40
- Meeting point: IOP registration desk, Peter Froggatt Centre

13:45	Meet at IOP registration desk, Peter Froggatt Centre
14:00	Depart from site
14:30	Arrival at Titanic Belfast
14:45	Entry to Titanic Belfast (2 hours recommended time)
16:45	Entry to Nomadic (1 hour recommended time)
17:45	Meet in the Atrium
18:00	Depart from site
18:30	Arrival at Queens University Belfast

Outreach Event - Tuesday 10 April

The Plasma Physics Group will be holding a public outreach lecture in the Peter Froggatt Centre. Guest speakers Deborah O'Connell and Norman Maitland will be giving a talk titled, "It's a matter of life and death for human cancers: When Plasma Physics meets Systems Biology". Hear about how physicists, chemists, biologists, medics and others are working on a new approach to tackling some of our major health issues.

Doors open at 19:00 for a 19:30 start. Tickets are free and can be obtained [online](#).





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Exhibition

Andor

Andor Technology is a global leader in the pioneering and manufacturing of high performance scientific imaging cameras, spectroscopy solutions and microscopy systems for research and OEM markets. Andor has been innovating the photonics industry for over 20 years and aims to continue to set the standard for high performance light measuring solutions that allow consumers to perform light measurements previously considered impossible. Through continuous dialogue with customers and strong teamwork, Andor continues to innovate ground-breaking products that improve the world in which we live. Andor Technology is part of Oxford Instruments plc, a leading provider of high technology tools and systems for industry and research.



Avantes

Avantes is a world leader in the field of spectroscopy. They develop and manufacture spectrometers, light sources, software and fiber optic cables. Avantes' products are highly customizable to any specific application, and integrated into even the smallest housings. These products therefore find usage in many OEM applications and markets, as well as in the scientific and industrial world.



Hidden Analytical

Hidden Analytical celebrates more than 35 years of design, development and manufacture of quadrupole mass spectrometers. Our products address a diverse range of applications - precision gas analysis, plasma diagnostics by direct measurement of plasma ions and ion energies, SIMS probes for UHV surface science, catalysis performance quantification, thermo-gravimetric studies - over a pressure range extending from 30 bar processes down to UHV/XHV.



Omni Technologies

Omni Technologies represents a complementary group of equipment suppliers covering a broad range of micro & nanoscale technologies including Semiconductor, NEMS, MEMS, PV and Plastic Electronics. We supply equipment to Universities, Institutes, Corporate R&D and Fabrication facilities.

The Omni range includes a wide range of thin film deposition and etching technology including atomic layer deposition, sputtering, microwave etching, plasma etching, PECVD, ion beam etch & deposition, together with magnetrons and sputter controllers. We also distribute the innovative Optix optical residual gas analyser, the Latticegear range of scribing and cleaving products, Mask cleaning and chemical mechanical polishing equipment.





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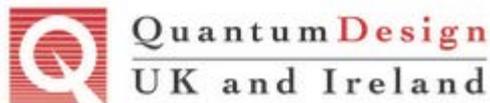
Princeton Instruments

Princeton Instruments provides state-of-the-art CCD, sCMOS, ICCD, EMCCD, emICCD, X-Ray and InGaAs cameras; spectrometers; spectrographs; imaging systems; optics and coatings that are key to the success of your application. We take pride in partnering with our customers to solve their most challenging problems in unique, innovative ways.



Quantum Design UK and Ireland Ltd

QuantumDesign UK and Ireland are one of the leading distributors of high-tech instrumentation and consumables for scientific, academic and industrial research. We offer a wide range of Spectroscopic Ellipsometers from J A Woollam which can be optimised for your particular application. Features include Rotating compensator technology, In-situ and Ex-Situ capability and revolutionary CompleteEASE software.



Information for presenters

Oral presentations

The lecture theatre includes an LCD projector, screen and PC. If you require any additional equipment, email priscilla.lim@iop.org. Presenters are asked to prepare their presentations to match the time allocated in the programme as these will be strictly enforced by the conference chairs.

Presentations should be structured to include an introduction, the main content and conclusions. Visual aids (e.g. maps, charts etc) can be used but you are advised to keep the information simple, use colour and contrast for emphasis and use a large enough font (minimum 15 point) to ensure legibility.

Please bring your presentation to the conference on a USB memory stick and load it onto the PC located in the lecture theatre no later than the start of the session in which you are speaking. Please save your file as your surname and initial in the appropriate folder on the desktop. Direct connection of personal laptops (with set-up in the break prior to the corresponding session) is the alternative. For those using a PC laptop, please make sure you have a VGA output. If presenting from a Macintosh, please bring a VGA cable.

The electrical current in the UK is 230v AC and 3 pin plug sockets. If you need an adapter, please bring one with you.





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Poster presentations

Posters will be on display for the duration of the conference with dedicated poster sessions taking place on Monday 9 April and Wednesday 11 April. Presenters are asked to be beside their posters as follows:

- Presenters with posters including an odd-number e.g. P1, P3, P5 etc. are asked to be available during the session on Monday 9 April.
- Presenters with posters including an even-number e.g. P2, P4, P6 etc. are asked to be available during the session on Wednesday 11 April.

Posters can be mounted from 11:00 on Monday 9 April and must be removed by 13:40 on Thursday 11 April. Any poster not removed at the correct time, will be recycled.

Poster boards are 2m by 1m and orientated vertically. Posters should be A0 in size (118.9 x 84.1cm / 46.8 x 33.1 inches), in a portrait format. Posters must be prepared in advance of the conference as it will not be possible to print them on-site. Fixing material will be supplied to mount your poster.

Poster Introductions

Poster presenters are invited to give a 2-minute oral presentations introducing their posters. Presenters will need to provide a 1-page slide in PDF format prior to the conference – the slide should be an advert for the poster. If you would like to be considered for this session, please contact priscilla.lim@iop.org.

Travel

Queen's University is within reaching distance to both airports; George Best Belfast City Airport (18 mins drive) and Belfast International Airport (38 mins drive).

Queen's University is a five minute walk from Botanic Train Station on the Bangor, Larne, Newry and Derry~Londonderry lines. A connection to Dublin is just one stop away, via Belfast Central Station.

For travel information, please refer to the website page at <http://plasma2018.iopconfs.org/travel>

Parking

Parking space within the University car parks is limited and, unfortunately, it is not possible for us to meet all the parking needs of visitors. It is therefore advised that you use public transport.

If you do wish to drive, you can use the Just Park website to locate the closest parking:

<https://www.justpark.com/uk/parking/queens-university-belfast/>

Health and safety

Safety and emergency evacuation procedures

In the event of a fire alarm sounding, all participants should evacuate the building and make your way to the assembly point at the front of the Physics Building, located at the car park side of the Hall, opposite the main building. Do not return to the room until instructed to do so by a member of the lodge staff. Conference delegates and participants should take note of the Fire Action instruction notices posted at the red fire alarm call points located near exits throughout the building.

Security

Do not leave your belongings or valuables unattended at any time, abandoned bags will be removed by security, and may be destroyed.





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Smoking

Smoking is not permitted anywhere within the building. There is a smoking shelter towards the McClay Library or delegates can go off site. Candles or naked flames are not permitted in any building without consent. Smoke detectors must not be tampered with under any circumstances.

First aid

For first aid, please contact Security on internal phones this is 5099 and direct dial is 02890975099

Payment

The organiser reserves the right to refuse admission to any participant who has failed to pay their stand rental prior to the event.

IOP Membership

Membership of the Institute is for everyone who has an interest in the subject and its future. The Institute actively promotes physics to external audiences, increasing awareness of the importance of physics in government, education and industry. Our members come from diverse backgrounds and follow all kinds of different careers; many are directly involved in physics but as many are using their physics training in a wide range of businesses.

For more information, please visit www.iop.org/membership

Membership benefits include:

- Physics World - the world's leading physics magazine, monthly by post, online or as an app
- IOP Journal downloads
- Careers information and resources
- Professional Status
- Academic dress
- Learning online courses
- '@physics.org' email address
- Support and grants
- Members' room
- Meeting rooms
- Member rate for IOP conferences
- Discount on author charges (NJP)
- Business journals
- Making money out of ideas
- Local branch affiliation
- Specialist 'Groups' - join the IOP Plasma Physics group
- Membertalk
- Apply to become a fellow
- IOP LinkedIn group



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www.iop.org/conferences

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