Welcome to another University year – this is my 7th year here and I still feel excited about being in Cambridge and remain in awe of the amazing people who work in this great institution. There are so many opportunities to collaborate and make new discoveries. Our facilities are fantastic and we have a superb clinical radiology department with colleagues who are very supportive of our research. This is a wonderful place to be educated and learn new research skills and techniques. I encourage you to be bold and innovative – the university will support you in your endeavours.

I was fortunate to be invited by CRUK to attend the Early Detection meeting in Portland, Oregon in September. The impressive Knight Institute was created by the founder of Nike with an offer of $0.5bn. Portland city and Oregon county raised the matching $500,000,000 within a two year period. The multidisciplinary meeting was excellent with expert international speakers explaining their field with clarity making their research accessible and inspiring. The next meeting is in Stanford and then Cambridge in September 2020. My other trip to the US was to the joint EUSOBI/SBI/ISMRM breast MRI workshop – again the experts met and debated the new developments and challenges in breast imaging – and thanks to the hyperpolariser team I was able to show the superb work from Cambridge in breast cancer.

We are especially proud of Dr Martin Graves with the award of the gold medal from ISMRM. And congratulations also to Professor Evis Sala and Dr Ferdia Gallagher for the Mark Foundation award and the CRUK Accelerator award. The new term has started at a fast pace with preparations for the REF now underway. We would appreciate contributions to the newsletter and also for help to update our web site. The web site is the external face of the department and should reflect the excellent work that is ongoing within the department.

**Department News**

**IPEM Academic Gold Medal Award for Dr Martin Graves**

Please join us in congratulating Dr Martin Graves on being awarded the Academic Gold Medal by the Institute of Physics and Engineering in Medicine for his work in the field of magnetic resonance imaging. From the IPEM website: An IPEM Fellow, Dr Graves is a consultant Clinical Scientist and Head of the MR Physics Group and Lead for Radiology IT at Addenbrooke’s Hospital in Cambridge and holds an Affiliated Lectureship at the University of Cambridge Clinical School. His work in MRI has included working on techniques for real-time interactive MRI and the development of quantitative biomarkers in oncological and neurovascular imaging. In addition to more than 200 peer-reviewed scientific publications, Dr Graves has also co-authored a number of books, most notably the award-winning *MRI: From Picture to Proton*, as well as *Physics MCQs for the Part 1 FRCR* and *The Physics and Mathematics of MRI*.

Dr Graves said: ‘I am extremely proud and delighted to receive the 2018 Academic Gold Medal. The award reflects my dedication, over the last 34 years, to the development of MRI methods, applications and teaching. But most importantly it acknowledges the support of my family as well as the contributions of my collaborators, students and colleagues, particularly the fantastic MR Physics and Radiology team in Cambridge, without whom I could not have achieved this honour. I am extremely grateful to them and IPEM.’
Prof. Evis Sala – Mark Foundation Institute for Integrated Cancer Medicine

Professor Sala is part of the team which has been awarded £8.6 million. The money will be used to support the new founding of the Mark Foundation Institute to be based here at the University of Cambridge. This aims to revolutionise cancer care by using cutting edge analytics to maximize the use of big data sets collected from patients. The award started in spring 2018 and includes a £4.6m tranche for imaging, £900k in Radiology.


Following on from the successful TOMMY trial which showed that automated absolute breast density is a predictor of breast cancer risk in populations at enhanced risk (Eur. J. Cancer 2018 Jan, 88; 48-56), Professor Fiona Gilbert and Paul Pharoah have been awarded £2.7 million by CRUK to investigate whether supplemental imaging of 12k women aged 40 – 70 years, who have been identified at routine mammographic screening as having dense breasts, will lead to improved breast cancer detection in this hard-to-image group. An industrial partnership with GE Healthcare is supporting risk-adaptive imaging by providing an ABUS system at three sites, together with £600K funding.

Prof. Fiona Gilbert, Prof. Evis Sala, and Dr. Gallagher - CRUK - Accelerator Award

Our PIs have been successful in their collaboration bid to bringing £900k to Cambridge for the proposed National Cancer Imaging Translational Accelerator

Researcher Feature: Shuo Wang

My PhD project focuses on the development of a novel uncovered stent system (named MOUS) for the management of complex aortic aneurysms. The highlight of this emerging technique is to keep the patency of vital branches, while promoting the aneurysm thrombosis and shrinkage. Encouraging outcome was achieved in preliminary study. I developed an image-based method to simulate the virtual deployment in silico and predict the flow modulation. This method was successfully used to identify key factors of the novel stent system, and can be integrated to personalised pre-surgical planning. Besides the computational analysis, I performed material tests on the aneurysm tissues and examined the microstructure of the aortic wall on histology. A Bayesian framework was developed to characterise the mechanical behaviour of the diseased arterial tissue from experimental results. The estimated material constants were found correlated to the microstructure of the tissue fibre network. I also collaborate with researchers in Division of Neurosurgery and worked on radiomics and radiogenomics of glioblastoma.

Figure 1 Image-based finite element analysis of the deployment of MOUS and the flow modulation.

Figure 2 The material constants estimated from experimental results are correlated to the microstructure within the aortic wall.
Open Day Event - Experimental Cancer Medicine Demystified

Frank Riemer presented his research to cancer patients at the open day event “Experimental Cancer Medicine Demystified”, organised by the Experimental Cancer Medicine Centre (ECMC) at the CRUK Cambridge Institute on Friday the 28th of September. His poster presentation followed on from a presentation by Dr Ferdia Gallagher and was positively received by cancer patients and their relatives from all over the country.

Tristan Barrett

This past year, Tristan was appointed to full time position of University Lecturer, Honorary NHS Consultant Radiologist and was awarded Doctor of Medicine (MD), University of Cambridge (Clare Hall). Tristan also took over as Director Academic Clinical Fellow and Radiology Academic Program. This year we have seen a rapid expansion in Academic-FY posts, with 5 scheduled in the current academic year.

Tristan is working as Co-Investigator on a multicentre Cancer Research UK Programme Award with UCL (awarded 07/2018; Title: "Novel microstructural MR and hyperpolarised Pyruvate in assessing prostate cancer") and is co-supervising a PhD student from the Department of Engineering, University of Cambridge: Nathan Sjoquist, PhD candidate 2017-20. (Title "Novel Techniques for Automated Detection and Visualization of Metastatic Bone Disease")

Student Update

Congratulations to Chang Sun, Gabrielle Baxter, Rafael Rehwald, Sally Andrews and Stephan Ursprung who have completed their 1st year assessment and now await formal registration for their PhD. Good luck Dimitri Kessler who will be completing his 1st year assessment soon. Also good luck to final year students Ammara Usman, James Grist, Shuo Wang and Surrin Deen who have submitted their theses and now await their viva.

Recent Awards and Prizes

Dr Karen Eley attended the annual meeting of the European Society for Head and Neck Radiology and won 2nd Prize for her oral presentation.

Dr. Tomasz Matys and Dr Karen Eley have won £20k from the Teaching and Learning Innovation Fund, they will be using this to develop an array of actual and virtual teaching aids in the form of a library of anonymised images and models

Dr Martin Graves - collaborative project award has been funded by GE – “Pet Imaging of Inflammation and Lipid Lowering”

Professor Fiona Gilbert and Dr Iosif Mendichovszky funded by Nottingham FB MRC – UK Renal Imaging Network - £150k

Dr Karen Eley has been awarded funding from the Academy of Medical Sciences for “Radiation and artefact free imaging in children with craniofacial abnormalities” - £30k

Dr Eva Serrao was awarded funding from the Academy of Medical Sciences for “Non-invasive diagnosis of hepatocellular cancer lesions in liver transplant candidates with HCC using hyperpolarised [1-13C] pyruvate” - £30k

Dr. Ferdia Gallagher and Dr.,Tristan Barrett – CRUK - Hyperpolariser/VERDCIT/T2 mapping Prostate Programme Outcome - Cambridge are a key part of a UCL led programme to have been awarded £1.3m: Novel microstructural (VERDICT and T2 mapping) and metabolic (hyperpolarised 13C-Pyruvate) MR in diagnosis, risk-stratification and treatment response assessment of prostate cancer

Doreen Lau and Fulvio Zaccagna were both awarded Bill Negendank Young Investigator Awards at the International Society of Magnetic Resonance in Medicine MR of Cancer Study Group meeting in Dublin. Doreen won first place and Fulvio won third.
Please welcome our new department staff!

**Dr Bala Attili**  
Research Associate  
Bala is working with Dr Luigi Aloj in Radiopharmacy.

**Dr. Ramona Woltek**  
Clinical Senior Research Associate  
Ramona will be working with Prof. Evis Sala in her collaborative group.

**Dr. Leonardo Rundo**  
Research Associate  
Leonardo is working with Prof. Evis Sala as part of her research group.

**Dr. Mary McLean**  
Senior Research Associate  
Mary is seconded to Radiology from CRUK-CI working with Dr Ferdia Gallagher.

**Zakaria Meddings**  
PhD Student  
Zak is working on Atherosclerosis and imaging, supervised by Professor Jonathan Gillard.

**Dr Iris Allajbeu**  
Visiting Researcher  
Dr Allajbeu is working on a large multicentric study with Professor Gilbert as principal investigator.

**Dr Hilal Sahin**  
Visiting Researcher  
Dr Sahin will be working oncologic imaging, mostly gynaecological cancers with Prof. Evis Sala.

**Dr Ruben Carvalho**  
Radiology Registrar  
Ruben is undertaking a Breast Imaging internship under the supervision of Professor Gilbert.

**Dr Lina Jing**  
Visiting Researcher  
Dr Jing will be working with Professor Gilbert and Dr Teng, studying hemodynamic methods based on medical imaging.

**Dr Camilla Panico**  
Visiting Researcher  
Dr Panico with Prof. Evis Sala and will concentrate her research on imaging the abdomino-pelvic and gastroenteric districts.

### Upcoming Events - Wednesday Forums

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| 31st October | Dr Sonia Benitez Rivero - “ESOR Neuroradiology experience in Cambridge”  
Dr Ahmet Peker - "What I have learned at Cambridge I.R.: From National to International Perspective"  
Dr Yethiksha Parag - “Breast Cancer in South Africa: Experiences of a Developing Country” |
| 7th November | Professor Maxine Jochelson  
“New Techniques for Breast Imaging and What Kind of Cancer Each detects”  
Professor Charlene Liew Jin Yee  
“Accelerating Change: The Singapore story of AI in Imaging” |
| 14th November | Dr Ruchi Sinnatamby  
“What use is a Travelling Professor?” |
| 21st November | Prof. Matthew A. Lambon Ralph  
“The neural basis of semantic memory and its clinical disorders: Convergence of multiple neuroimaging methods and probes” |
| 28th November | R S N A - No forum this week |
| 5th December | Dr Andrew Grainger  
“MRI Challenges in Inflammatory Arthritis” |
| 12th December | Dr Matthew Wallis  
“Reducing over treatment of DCIS (and other screen detected lesions)” |
| 19th December | Radiology Christmas Quiz |
Recent Publications - June - September 2018


Radiology Research Seminars
These research-focused seminars are regularly advertised in advance
and take place on Mondays at noon.

Department Staff General Meeting
12:00 pm - 29th October
Berridge Room


Equality and Diversity and Wellbeing News

Our Equality and Diversity officer is Dr Frank Riemer

- Laura Lechermann has joined as the graduate student E&D representative.
- We are looking for an Athena SWAN representative. Want to make a difference? Please contact Frank Riemer or Richard Hill
- Have recently won an award? Please remember to forward the news to Ralph and also the Clinical School Newsletter team.
- A mentoring scheme is now available to researchers at all stages, please contact Frank for more information.
- The daily walking group is still going and is always happy for more people to come along (see posters on notice boards)
- Electric bikes for hire are soon available from the Clinical School. I will update you when the booking system comes live.
- Don’t forget to join MyFamilyCare - University of Cambridge members are entitled to two free sessions of child or adult care a year! [https://www.medschl.cam.ac.uk/human-resources/my-family-care/](https://www.medschl.cam.ac.uk/human-resources/my-family-care/)
- A nursery available to Clinical School Staff is in planning at Homerton College (short walk down Hills road), we will inform you when more details are known.

Open Access Update

As you all know, since HEFCE’s policy change, in order for any publications to be eligible for the REF they must be made Open Access. We want to make sure that as a department we are 100% compliant. The university has a team in place dedicated to making sure this process is as simple as possible and has now linked Open Access with Symplectic Elements so that publication data will be filled automatically from databases.

**When a journal accepts your paper for publication, upload it through Symplectic before you sign any copyright or Open Access agreements.**

See this page for more information on how to submit accepted publications: [http://osc.cam.ac.uk/open-research/symplectic-elements-deposit-pilot/depositing-articles-symplectic-elements](http://osc.cam.ac.uk/open-research/symplectic-elements-deposit-pilot/depositing-articles-symplectic-elements)

You can also contact the open access team directly at: info@openaccess.cam.ac.uk

Open Access FAQs

Q: If I am not the first or last author do I still need to submit?
A: If the first author is in our department please ask them to submit.
- If they are in another Cambridge department and you have access to the accepted manuscript please submit it anyway.
- If you are the only Cambridge author please submit if possible.
- The bottom line is to have as many of our publications be eligible for the REF as possible. The Clinical School evaluates us on our compliance levels, and this reflects on both the department and the University.

**When do I submit to/contact the Open Access Team?**

As soon as the paper is ACCEPTED. This is because the Open Access Team will want to support you in making sure the publication is published under the correct Open Access license. This needs to happen during the initial negotiations, before you have signed the publisher agreement. The acceptance date is also how compliance with the HEFCE policy is determined.
Department Website
In every newsletter, we will be requesting that all department members – **including students** - update three specific tasks for us:

- Please ensure that your Symplectic account is up to date. We pull publication data for the website using this database, so to make sure your publications are up to date on the website.
- Please send us any news or information about the projects you’re working on! We want to publicise the department’s achievements as much as possible, and get your names out there.
- The website’s pages on research teams and projects are out of date. Any material available for public consumption would be a great help!

It goes without saying that it is essential in the current academic market to promote your work, and we want to help you do that!

Feedback
We are currently working hard to improve communication and development within the department, and a big part of that work requires feedback from you. We are open to hearing any feedback or suggestions you have. If you’d like to provide feedback on anything department related, in addition to coming to see us, you can now provide it through a feedback form located on the Internal website via this link: [http://radiology.medschl.cam.ac.uk/internal/feedback/](http://radiology.medschl.cam.ac.uk/internal/feedback/)

**We want to hear from all of you in relation to achievements, updates, news and any information you would like to share with the Department.**