NETLAS NEWSLETTER 1

LAUNCH OF THE NETLAS DOCTORAL SCHOOL

On 20/02/2020, the Applied Optics Group, School of Physical Sciences, has hosted the kick-off meeting of the Marie Curie Doctoral School – Innovative Training Network (ITN), Next generation of tunable lasers for optical coherence tomography (NETLAS).

NETLAS is supported by Marie Curie Actions of the European Commission, with 4.3 million Euros funded by Innovative Training Network (ITN). The project provide state-of-the-art research training in the design and build of the next generation of tunable optical sources for optical coherence tomography (OCT) applied to medical imaging and non-destructive testing (NDT). NETLAS will foster training and education of young researchers in a cutting-edge and rapidly expanding hot topic, while developing 12 novel Photonics technologies and their translation into several distinct areas of application.
All postdoctoral researchers will benefit from a structured and comprehensive learning experience, including lab training and research, theoretical teaching, transferable skill development and network building, in academic and industrial settings. The project will will educate 15 PhDs with support of other 13 partners in Europe, during 2020 - 2024. Recruiting of PhD applicants started a few months ago. The Marie Curie fellows will receive generous packages and the partners substantial support to provide training by research. These grants are highly oversubscribed, with 7.5% chances of success.

Professor Philippe de Wilde, Deputy Vice-chancellor for Research and Innovation, who opened the meeting, coordinating an ITN, affirmed that Kent as a leading place to stimulate high quality research and administer successful European collaborative research on optical coherence tomography (OCT) for medical imaging and non destructive testing.

On this occasion we hosted several world leader scientists and entrepreneurs from Europe, who have been awarded prestigious prizes in the past.
3 of the academic involved received ERC Ad grants. 4 industrial partners in the ITN received industrial awards, such as the coveted PRISM Award. More details below.

The 13 other members of the NETLAS consortium are all renowned in their own fields:

Beneficiaries, in addition to the University of Kent:

1. University of Darmstadt, Germany: Prof. Thomas Kusserow and Prof. Sascha Preu, Unique VCSEL (semiconductor laser) technologies;

2. Technical University of Denmark (DTU) (equivalent of Oxford for technical HEIs among Northern European institutions): Prof. Kresten Yvind, Horizon Prize 2016, Electro Prize 2017, unique facilities for nanostructures.

3. University of Luebeck (Germany): Prof. Robert Huber, ERC StG 2010, ERC CG 2016, European Inventor Award (2017), 7 other Prizes, inventor of the Fourier Domain mode locking (FDML) mechanism in lasers, pioneer of Megahertz-OCT, World record in ultra fast OCT imaging of the eye;"

4. Tampere University (2nd largest University in Finland): Prof. Mircea Guina, ERC Ad 2017, leading a unique facility to grow semiconductor materials for lasers;

5. Innolume, Dortmund, Germany, GaAs laser diodes, quantum dots, well known by the Photonics Community, PRISM Award winner/2020, Dr. Igor Krestnikov.

6. NKT, Denmark, worldwide leader company in supercontinuum lasers, Prism Award winner 2015, Prism award finalist 2018, industrial partner in the former ITN – European Industrial Doctoral School with Kent (A. Podoleanu PI), 2010 – 2014, that educated 5ESRs and has loaned to the Applied Optics Group several lasers exceeding £160k, after the EID ended, for an indefinite term, Dr. Patrick Bowen, Dr Peter Moselund and Mr. Sacha Grellet.

7. Superlum Ireland, worldwide leader of Superluminescent diodes for OCT, Photonics Spectra Magazine: Photonics Circle of Excellence Award 2004, Dr. Alexander Chamorowskiy and Dr. Vladimir Shidlovski.

Associate partners:

8. Centervue Italy, world leader in fundus cameras for the eye, Specsavers UK use such instruments, Winner of "Most Innovative SME" at Italian innovation day, now present in over 50 countries.

9. Northwick Park Hospital (LNWUH NHS Trust), London, London Deanery award for postgraduate training in ENT, more than 8000 medical, nursing and support staff with combined revenues of approx. £450 million. One of the largest integrated care organisations in the country, covering approx. 1 million population.

   Taran Tatla, Consultant in ENT-Head and Neck Surgery, expert in endoscopy of the upper aero-digestive tract and minimally invasive / endoscopic methods for disease management (diagnosis and therapy). National multi-disciplinary course director and training programme director for ENT higher surgical training (NW London). Speer-heading integrated ENT disease screening projects for hearing loss, balance disturbance and other conditions across the age spectrum, children through adults to elderly. Collaborative academic links via NIHR with the Ear Institute, UCL and Hamlyn Centre for Robotics, ICL.

10. OCTLight, spinout of DTU, most compact fast laser for OCT, winner of the EU SME P1 2017, Eurostars 2017.

11. Optores, Munich, fastest laser for OCT of the eye, European inventor award for co-founder Robert Huber, Prism award finalist, 2019.

12. Recendt Linz, Austria, unique research institute in the world on non destructive testing, / Bettina Heisse, VW Foundation Grant, 2017.

13. Moorfields Eye Hospital+Institute of Ophthamology, the top entity in the world in terms of number of publications on the eye, the 1st HEI for training ophthalmologists in the world.

    Prof. Christopher Dainty / FOSA, FSPIE, FIOP, FEOS, Royal Irish Academy, C E K Mees Medal and Prize (OSA 2003), 4 other Prizes, former President of the Optical Society of America, Former President of the European Optical Society.

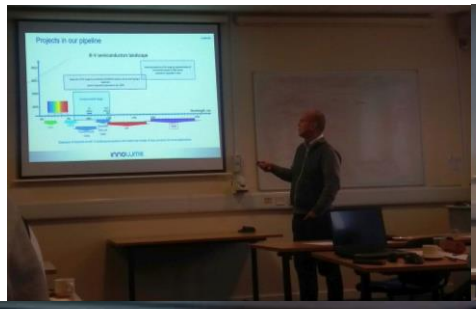
Prof. David Garway-Heath, President of the European Glaucoma Society, NIHR Emeritus Senior Investigator, Director of the Visual Assessment and Imaging Theme of the Biomedical Research Centre at Moorfields Eye Hospital and UCL Institute of Ophthalmology, that supported the Applied Optics Group for 7 years so far.

Dr Pearse Keane, prestigious "Clinician Scientist" NIHR 2015 award, use of OCT imaging in the eye, nanotechnology and AI.

Dr Ranjan Rajendram on spectroscopic OCT and detecting proteins in the eye, Consultant Ophthalmologist, Medical Retina.

After the meeting, the participants were invited to visit the Applied Optic Group laboratories. Photos taken during the presentations and the visit labs will follow.

NetLaS


Projects in our pipeline


Broadband laser solutions


Imaging targets


Photonics and Optical Communication Group


OptoRes

The event was finished with a get together dinner.

AGENDA KICK-OFF NETLAS ITN

20th February 2020

Apologies:
Institute of Ophthalmology London: Christopher Dainty, Pearse Keane, Ranjam Rajendram

9:30 Adrian Podoleanu, general introduction for the house keeping
9:33 Welcome from University Executive Group, Professor Philippe De Wilde, Deputy Vice-Chancellor Research & Innovation, Office of the Vice-Chancellor

9:45 – 10:15 Adrian Podoleanu, presentation of the NETLAS ITN structure and activities

Presentation of each partner
15 minutes each, start 10:15
10:15 – 10:45 ***DTU*** Kresten Yvind, ***UzL*** Robert Huber, ***TUT*** Mircea Guina
10:45 – 11:00 Coffee Break
11:00 – 12:30 ***Innolume*** Igor Krestnikov, ***NKT*** Patrick Bowen, ***Superlum*** Vladimir Shidlovski, ***CenterVue*** Giuliano Barbaro, ***OCTLight*** Kresten Yvind, ***ORS*** Tom Pfeiffer

12:30 – 13:30 Lunch

Presentation of each partner (continued)
13:30 – 14:15 ***TUD*** Thomas Kusserow, Sascha Preu, ***RECENDT*** Bettina Heise, ***UCL*** Ted Garway Heath, ***NPHL*** Taran Tatla
14:15 – 14: 45 Consortium agreement and administration from the coordinator, Rob Whiteing
14:45 – 15:45 Visits to the Photonics labs
15:45 – 16 Coffee

Disscussion on the administration of WPs in Table 1.1, WP1, WP6, WP7 and WP8
16:00 – 17:00 Adrian Podoleanu, George Dobre, Ramona Cernat, moderators of discussions with all and especially with the **Leaders of subdivisions of WP6, WP7, WP8,** who should prepare short interventions/statements on the ways forward, please see Table 1.1 in the application
17:00 – 17:30 Preliminary discussions on pairs of supervisors for each PhD, according to the NETLAS Programme of activities

18:45 Dinner, Bill's Canterbury, 5 Rose Ln, Canterbury CT1 2SJ