



Principal Scientist- Bio Photonics

SAE-10 Principal Scientist- Bio Photonics

Contract: Full Time/Fixed Term

PURPOSE OF ROLE

Biophotonics@Tyndall is a newly established collaborative research programme based at the Tyndall National Institute led by Professor Stefan Andersson-Engels. The Group's focus will be to form close collaborations with clinicians, research centres and companies to accelerate biophotonics technology and rapidly deliver breakthrough technologies into the hands of health-care providers. Using photonics as a driver for the faster development and deployment of more accurate, less invasive diagnostic and treatment methods for cancer and other diseases. The new programme has been formed by the Tyndall National Institute, the Irish Photonic Integration Centre (IPIC) and University College Cork, under a €5M award from Science Foundation Ireland (SFI).

Reporting to the Head of Biophotonics, the position of Principal Scientist will be expected to provide a supporting leadership role in the expansive research programme and in the supervision and management of the Biophotonics@Tyndall group at IPIC. The successful candidate will also be directly responsible for one or more of the projects to be initiated under this exciting new venture, including finding solutions to existing clinical and pre-clinical challenges and the advancement of techniques such as diffuse reflectance, fluorescence, Raman and photoacoustics. Further details can be found at <http://www.ipic.ie/people/stefan-andersson-engels/>.

Key Responsibilities

The candidate is expected to be creative, self-motivated, and should inspire group members to work efficiently, create a friendly atmosphere and collaborative environment. This is a key position, of central importance for the success of building this new biophotonics activity at Tyndall and the establishment of partnerships with external research centres, such as INFANT and APC, and industry partners. The main technical area of expertise is most likely be within integrated optics, where many of the other project areas will need to develop integrated systems to enable the rapid deployment of the technology. This work will be conducted in collaboration with the group of Dr. Peter O'Brien at IPIC. The expertise area of research might also be within biomedical optics systems or waveguide engineering or other central fields of research within the team.

Key responsibilities will include:

- Contribute towards the strategic development of the Group in line with the IPIC strategy and the Tyndall Strategic plan
- Together with the Head of Biophotonics identify and develop a portfolio of independent research programmes
- Support the management of research capabilities, laboratories and associated infrastructure in order to successfully execute research objectives,
- Together with the Head of Biophotonics establish, manage and develop the research team (staff, post-docs and students) and provide mentorship, coaching and supervision as appropriate
- Lead engagement on intellectual property activities in partnership with the Office of Technology Transfer

- Develop national and international collaborative research networks and create new synergies/collaborations between Tyndall and other research third party bodies
- Secure, drive, manage and have full operational responsibility for a portfolio of national and international funded research projects
- Leverage existing projects and research facilities at Tyndall in order to identify new research opportunities and industrial projects
- Independently identify research objectives and potential funding sources and prepare and write bids for funding proposals
- Establish and maintain key industrial partnerships, including management and delivery of commercially-focused projects
- Disseminate the outcomes of the research, including peerreviewed academic publications and presentations at conferences of international standing
- Support the hosting/chairing of international conferences
- Supervise postdocs, post graduate research students as supervisor and/or cosupervisor, as appropriate
- Participate in post graduate examination internal and external
- Be able to participate in undergraduate teaching as required
- Participate in Education and Public Engagement activities, as required.
- Ensure all activities are compliant with the Tyndall Quality Management system
- Ensure all activities are compliant with the required Health and Safety standards
- Carry out any additional duties as may reasonably be required within the general scope and level of the post

Essential Criteria

- The successful candidate must have a Ph.D. in one of the following disciplines: physics, biomedical engineering, electrical engineering, or a related field
- At least eight years relevant post-doctoral experience
- Track record of high quality peer reviewed publications, as evidenced by h-index
- Writing of competitive research proposals, national and EU
- Proven track record of securing research funding and the coordination of successful European and National collaborative research projects (including industry-focused research)
- The candidate must demonstrate an academic record of scientific excellence, independent research, and good writing and communication skills
- Strong theoretical and experimental skills and hands-on experience with optical systems
- Significant experience of research-led teaching and examining at postgraduate level as the primary academic supervisor
- Experienced in the formation and management of research teams, including supervision to completion of postgraduate students

Desirable Criteria

- Experiences of relevance for the fields of biomedical optics, the ultrasound-optical interaction for waveguide engineering project and within system integration are desired.
- The applicant should be eligible to apply for a SFI starting investigator research award. He or she will demonstrate a desire to develop a long term research career in Ireland, and will be committed to ensuring that research outputs will be exploited to the benefit of the Irish economy.
- Experienced in the following areas, and will demonstrate an aptitude to develop key skills in the remaining areas:
 - Supervision of Postdoctoral Researchers, Postgraduate students and undergraduate students

- Establishment and maintenance of key academic and industrial partnerships
- Management of commercial development projects
- Financial management of awards
- Strong background in establishing new research facilities including:
 - Development and implementation of a multi-disciplinary research programme
 - Identification and procurement of research infrastructure
 - Management and design of research laboratories
- Experience of holding a teaching position in a 3rd level institution could be an advantage
- Knowledge transfer and commercialisation experience

Appointment may be made at the Grade 7 Admin B salary scale: €68,858 - €89,899 per annum. Salary placement on appointment will be in accordance with public sector pay policy.

Informal queries can be emailed to Prof. Stefan Andersson-Engels at stefan.andersson-engels@tyndall.ie.

Application Instructions

Step 1 - candidates should apply in confidence by clicking [here](#) to download and complete the application form and indicate SAE-10 as the Job Reference

Step 2 – return the completed application form, together with your CV and motivation letter to careers@tyndall.ie.

Handwritten forms will not be accepted.

For an information package including full details of the post, selection criteria and application process click [here](#).

Please note that Garda vetting and/or an international police clearance check may form part of the selection process.

The University, at its discretion, may undertake to make an additional appointment(s) from this competition following the conclusion of the process.

Please note that an appointment to posts advertised will be dependent on University approval, together with the terms of the employment control framework for the higher education sector.

At this time, Tyndall National Institute does not require the assistance of recruitment agencies.

Tyndall National Institute at University College, Cork is an Equal Opportunities Employer.