

PhD at the Antwerp University Hospital

At the Department of Ophthalmology of the Antwerp University Hospital we investigate early detection of keratoconus, a pathology in which the cornea is severely deformed. If detected early, these patients can be treated early which will give them a better long-term quality of vision.

This research has led to the development of the Keratoconus Assistant, a machine-learning program that automatically detects unusual corneal shapes measured with the Pentacam corneal tomography system.

Current project aims to expand the parameters analysed from a purely shape-based program to one that integrates both corneal shape and biomechanics (elasticity). This may permit prediction of keratoconus progression and customization of treatment to the individual patient. For this project we are currently looking for a scientific researcher/ PhD student.

Job description

- * You work at the Department of Ophthalmology of the Antwerp University Hospital (Belgium);
- * You investigate early keratoconus detection and progression risk assessment with the aim of writing a doctoral thesis;
- * You coordinate retrospective data collection in several European partners;
- * You perform prospective measurements on patients in function of your research.

Job requirements

- * You have a university master degree in physics, optometry, computer science or engineering science, with an special interest in optics and statistics;
- * You are fluent in English and are willing to learn basic Dutch;
- * You can work independently and in a team;
- * You are flexible and stress resistant;
- * Experience with Matlab, Java, Machine Learning and Finite Element Modelling are important assets.
- * You are available from 1 Jan 2017 onwards.

We offer

- * Full-time contract for a limited period (4 years), extensions are possible through grant applications;
- * Education in the operation and interpretation of the measurement equipment;
- * Many possibilities for continued education;
- * Meal vouchers of 3,40 EUR per day (8h);
- * Various possibilities for children's daycare.

Application

Applications can be done via: <http://bit.ly/2eXmktj>