

München, 17. November 2019

## BA or MA Thesis or Project Work

### „Optical Contact Lens Sensors“

**Background.** Contact lens have emerged as a minimally-invasive platform for diagnostics and drug delivery. Contact lens sensors have been developed for analyzing the composition of tears as a surrogate for blood biomarker monitoring and for the diagnosis of metabolic disorders. However, the eye offers a wide diagnostic potential as a sensing site, where contact lens sensors have the potential to improve the diagnosis and treatment of many diseases.



**Project scope.** The aim of this project is to develop novel, state-of-the-art methods for contact lens sensor fabrication and quantitative optical sensing. These contact lens sensors will be integrated with smartphone camera readouts. Contact lens sensors will be used in point-of-care settings to continuously monitor a disease state. This project will take place in TranslaTUM in collaboration with Prof. Oliver Hayden.

**Reference:** Capillary Flow in Microchannel Circuitry of Scleral Lenses. RSC Advances, 9, 11186-11193 (2019)

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