



## **QME ontwerpproject**

**Bettine van Willigen** 

## **Openbare eindpresentatie:**

Datum: Tijd: Locatie: vrijdag 6 september 2019 11.00 uur Flux 0.300, Groene Loper gebouw 19, TU/e, Eindhoven, De Zaale, 5612 AJ, Eindhoven

## AngioSupport: a novel and quantitative tool allowing clinical decision making for cardiac teams to plan coronary interventions\*

LifeTec Group	
Begeleider bedrijf:	dr.ir. J.M.A. Stijnen (Marco)
Begeleiders zorginstelling:	dr.ir. W.A.L. Tonino (Pim) en dr.ir. M. van 't Veer PDEng (Marcel)
Inhoudelijk begeleider(s) TU/e:	prof.dr.ir. F.N. van de Vosse (Frans) en dr.ir. W. Huberts (Wouter)
Opleider SMPE/e:	dr.ir. I.M.M. Lammerts (Ivonne)

Cardiac teams in the larger hospitals discuss the treatment of multiple patients with coronary artery disease (CAD). These patients have one or multiple severe occlusions in the coronary arteries and for each patient a treatment plan is defined, typically consisting of coronary artery bypass graft (CABG) surgery or percutaneous coronary intervention (PCI). The decision between these treatments is currently based on studying coronary angiograms and the experience of the cardiac team. However, in case of multiple occlusions, diffuse coronary disease or complicated vasculature, choices in the position, length or diameter for a CABG or PCI is challenging. Therefore, AngioSupport is developed; an interactive tool to predict the outcome of CABG or PCI to support clinical decision making of coronary interventions. Using AngioSupport, stenoses as well as their severity are easily revealed within seconds by computation of blood flow and pressure inside the coronary arteries. The conventional coronary angiograms and the mean aortic pressure are the only input necessary. Moreover, clinicians can perform multiple interventions virtually and compare the predicted outcome of each intervention.



\*Deze openbare eindpresentatie is in het Engels/This public end review will be in English!



SMPE/e School of Medical Physics and Engineering Eindhoven BMT ontwerpersopleiding Qualified Medical Engineer