

# AccuQT

## Accurate correction for QT interval – the most important cardiac risk measure

.....

In the electrocardiogram (ECG), the QT interval is an essential quantity in assessing cardiac health. Therefore, the QT interval must be determined as accurately as possible. The problem is QT's complex dependence on the RR intervals (heart rate). This dependence must be computationally corrected. The present correction formulas are simple approximations that often produce erroneous results, leading to unnecessary examinations and wrong diagnoses.

We have discovered the exact dynamical dependence between the RR and QT intervals. Our follow-up method, *AccuQT* (patent pending), computes the corrected QT intervals precisely during the ECG measurement. *AccuQT* reduces the present QT correction false rate of 5...30% down to 0%. The method can be readily implemented to ECG devices. In SPARK we develop our innovation to a clinical solution ready for commercialization.

**SPARK VALUE:** We expect the SPARK program to steer our invention towards clinical applications. Our aim in SPARK is to expand our networks in medical technologies, especially in cardiological hardware and software. SPARK enables us to get valuable feedback from industrial partners and from fellow scientists.



**Esa Räsänen, Prof., Dr. Sci.**

Principal Investigator of AccuQT

Esa is a professor of physics, who has published about 130 journal articles, including recent breakthroughs in time-series analysis of physiological signals. In AccuQT Esa combines his passions in physics and health.

**Janne Solanpää, Dr. Sci.**

Chief Software Architect of AccuQT

Janne is an experienced software engineer, data analyst and physicist. He has developed and published several numerical methods and software. Janne manages the AccuQT technology according to the highest standards for medical software.

