Th.OS-3.2 ウェアラブルセンサのアプリケーション探索

10:30 – 12:00 (第3会場／Room 3)

Th.OS-3.2-1
Electrocardiogram Measurement during Overnight Sleep using Smart-wear

Yusuke Sakaue (Ritsumeikan Global Innovation Research Organization, Ritsumeikan University)  Ayu Kodera (Faculty of Sport and Health Science, Ritsumeikan University)  Naruhiko Shiozawa (Faculty of Sport and Health Science, Ritsumeikan University)  Masaaki Makikawa (Faculty of Science and Engineering, Ritsumeikan University)

Sleep quality is important for maintaining good health. However, many people are not satisfied with their quality of sleep. As a decline in sleep quality leads to a deterioration in attention and concentration during the day, the evaluation of sleep quality in daily life is necessary to improve sleep quality. In our previous works, smart-wear that could measure the electrocardiogram (ECG) in daily life was developed. The purpose of the present study is to measure the ECG during overnight sleep by using the smart-wear in order to evaluate sleep quality. The ECG of 15 healthy males was measured for 8 h during overnight sleep and stored on their smartphone. After the experiment, the measured ECG was evaluated by visual confirmation of R peaks at intervals of 60 s. The results show that the R peaks can be observed at 79.9 ± 10.5 % during overnight sleep.