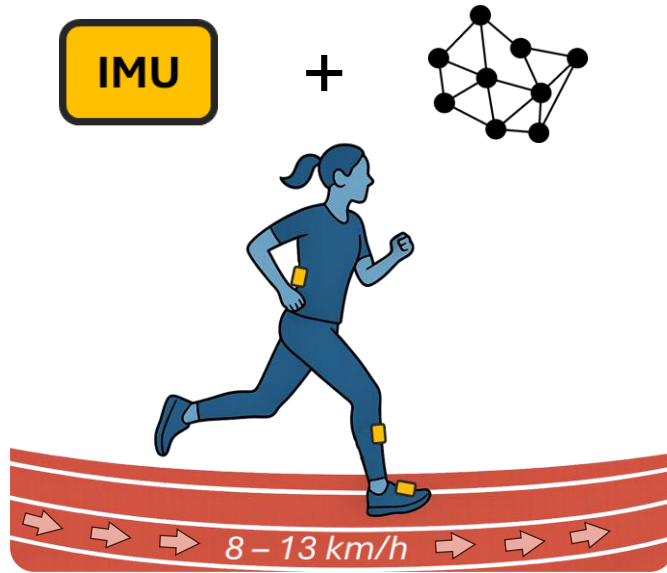


Running speed modulates joint kinetics and ground reaction forces during outdoor running: a wearable sensor study

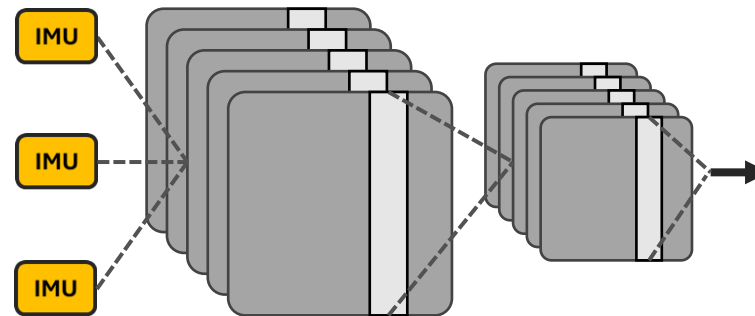
Lucas Höschler, Christina Halmich, Saša Cigoja, Martin Ullrich, Anne D. Koelewijn & Hermann Schwameder

Real-world running analysis



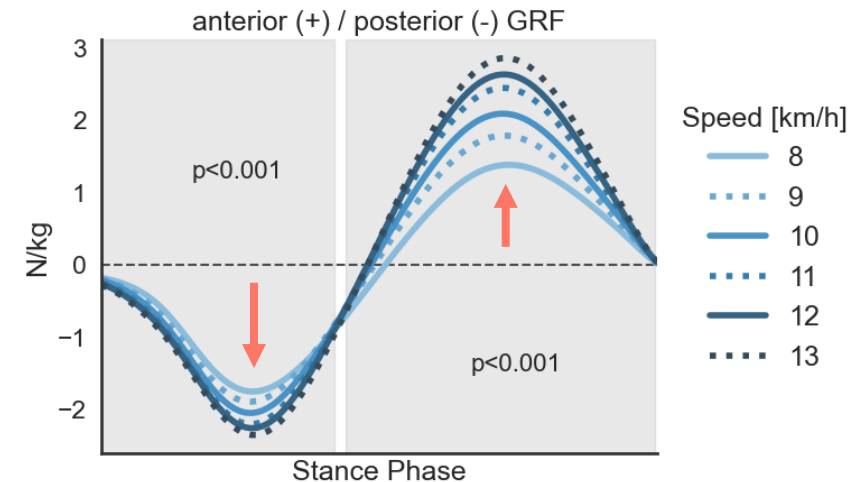
Wearable sensors and ML are used to assess outdoor running biomechanics during an incremental test.

Convolutional Neural Network (CNN)



CNN predicts GRFs and joint moments from IMU data. The model is trained and validated using an independent data set.

SPM analysis



GRFs, ankle and hip moments increase with speed. Knee moments plateau beyond 10 km/h.