Estimation of time-variation in HRV spectrum associated with fatigue

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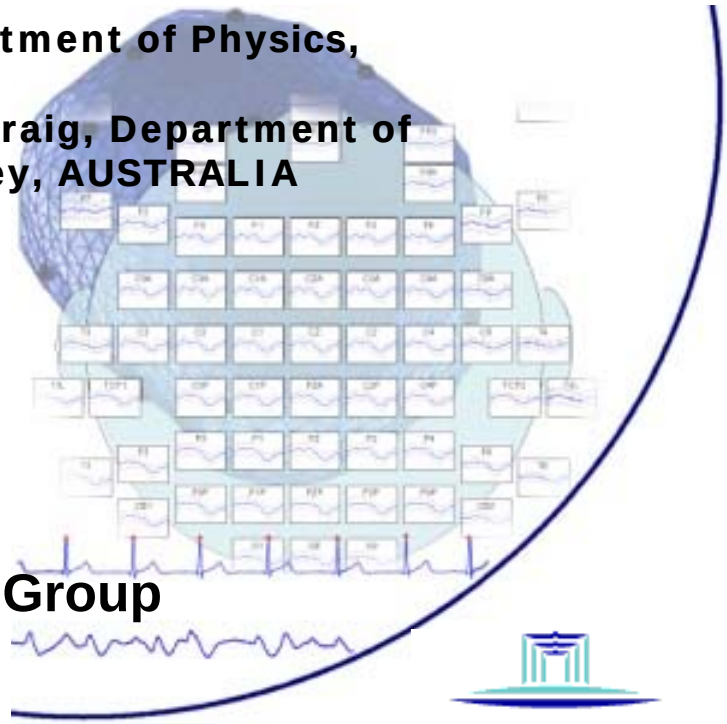

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- We present a Kalman smoother approach for estimating HRV dynamics.
- In this method, the RR signal is first modeled with time-varying AR model.
- The model parametersare then estimated recursively with the Kalman smoother algorithm.
- The time-varying spectrum estimate is obtained from the estimated model parameters and its statistics can be evaluated by using the error propagation principle.
- The obtained spectrum estimate can further bedecomposed into separate, e.g. LF and HF, components.