

Electromyography as a quantitative tool in ergonomic investigations

A theoretical and practical presentation of selected EMG measurement setups and analysis strategies in workspace and field conditions

Invited speaker:	Peter Konrad PhD, ProPhysio Centrum für Physiotherapie Rehabilitation und Prävention – Köln, Germany
Date, Location:	At applicants' choice, his own institute/company
Presentation:	Scientific lecture and practical demonstrations
Participants:	Ergonomics, physiologists

Topics:

EMG neuromuscular basics and principles

- “Muscles alive” – the philosophy of EMG investigations
- Origin of the EMG signal
- Detection techniques and amplifier principles

Analysis and Interpretation Strategies

- EMG specific signal processing
- EMG analysis parameters and techniques
- Interpretation strategies

Kinesiological EMG as an evaluation tool in occupational settings

- Analysis of neuromuscular coordination in work space activities
- EMG as an indicator for neuromuscular effort in work conditions
- EMG as an indicator for local fatigue
- Quality Control of ergonomic work space conditions
- Neuromuscular Analysis of human interfaces and work tools

Practical Demonstration of selected application examples

- How to prepare an EMG measurement
- How to perform telemetric EMG tests under lab/field conditions
- Biofeedback training in PC - workspaces