Methods for studying music-related body motion
Music-related body motion
Music-related body motion
Challenges
Challenges

1. Aim
Challenges

1. Aim
2. Subjects
Challenges

1. Aim
2. Subjects
3. Motion
Challenges

1. Aim
2. Subjects
3. Motion
4. Environment
Challenges

1. Aim
2. Subjects
3. Motion
4. Environment
5. Artefacts
Challenges

1. Aim
2. Subjects
3. Motion
4. Environment
5. Artefacts
6. Audio
Challenges

1. Aim
2. Subjects
3. Motion
4. Environment
5. Artefacts
6. Audio
7. Video
Challenges

1. Aim
2. Subjects
3. Motion
4. Environment
5. Artefacts
6. Audio
7. Video
8. Data handling
Analysis

Descriptive
Analysis

Descriptive

Functional
Analysis

Descriptive

Functional

Quantitative
Analysis

Descriptive  Quantitative
Functional    Qualitative
Analysis

Descriptive

Functional

Quantitative

Qualitative
Qualitative movement analysis
Qualitative movement analysis

Rudolf Laban
(1879-1958)
Qualitative movement analysis

- Labanotation

Rudolf Laban (1879-1958)
Qualitative movement analysis

- Labanotation
- Laban movement analysis

Rudolf Laban
(1879-1958)
Labanotation
Labanotation
Laban Movement Analysis
Laban Movement Analysis

• Body
Laban Movement Analysis

- Body
- Shape
Laban Movement Analysis

- Body
- Shape
- Effort
Laban Movement Analysis

- Body
- Shape
- Effort
- Space
Effort

Flow

Space

Weight

Time
**Effort**

- **Space**: Direct, Indirect
- **Weight**: Light, Strong
- **Time**: Sustained, Sudden
- **Flow**: Free, Bound
Quantitative movement analysis
Motion capture
Motion capture

• Camera-based systems
Motion capture

- Camera-based systems
- Sensor-based systems
Camera-based systems
Camera-based systems

- Regular light
Camera-based systems

• Regular light
• Infrared, depth image, etc.
Camera-based systems

- Regular light
- Infrared, depth image, etc.
- No markers
Camera-based systems

- Regular light
- Infrared, depth image, etc.
- No markers
- Markers
Sensor-based systems
Sensor-based systems

- Acoustic
Sensor-based systems

- Acoustic
- Mechanical
Sensor-based systems

- Acoustic
- Mechanical
- Magnetic
Sensor-based systems

- Acoustic
- Mechanical
- Magnetic
- Inertial
Sensor-based systems

- Acoustic
- Mechanical
- Magnetic
- Inertial
- Electrical
Summary
Summary

• Qualitative – Quantitative
Summary

• Qualitative – Quantitative
• Cheap – Expensive
Summary

- Qualitative – Quantitative
- Cheap – Expensive
- Small – Large
Summary

- Qualitative – Quantitative
- Cheap – Expensive
- Small – Large
- Simple – advanced