

# Backtracking golf shot outcome measures: investigating golf swing performance measures to gain a better understanding of the effects of IM-training.



## Course Description:

The effects of IM-training on golf performance have – so far - only been evaluated by examining the outcome of the golf shot. No studies have yet investigated the effect of IM-, or any other type of timing-training, on the kinematic characteristics of the golf swing performance. This webinar has its starting-point from a published scientific paper that examines the effects of IM-training on the above mentioned kinematic characteristics. The webinar further aims to explain what variables of golf swing performance/execution that the IM-training affected. More specifically, we will delineate whether IM-training influences the timing and rhythm variables, or the co-ordination and synergy of the golf swing performance. Moreover, we will discuss possible ways of interpreting motor performances, as well as highlighting theories within the motor-timing domain that may give us a better hunch about how timing and motor control relates. In short, the webinar focuses on the influence of IM-training on the kinematic properties of golf-swing performance, the methods used to assess possible changes in golf swing performance, and the theories that best explain our findings.

## Target Audience:

- Occupational Therapist
- Certified Occupational Therapy Asst
- Physical Therapist
- Physical Therapy Asst
- Athletic Trainer
- Licensed Medical, Rehabilitation or Mental Health Professional
- Music Therapist

## Learning Outcomes:

Upon completion of this course, participants will be able to:

- Observe the unique movement that a golf swing represents, and to understand the timing and rhythmicity aspects of it;
- See that the effects of IM-training on golf swing performance can be described by several theoretical approaches;
- Demonstrate knowledge as it pertains to the understanding of the basics the timing – coordination coupling.

**\*Note: This course covers information that pertains to licensed therapists and therapy assistants. COTA and PTA professionals must practice IM under the supervision of a licensed OT or PT**

## Instructor:

Marius Sommer is a 3rd year PhD Candidate in Sport Psychology @ Umeå University - Sweden. His thesis aims to investigate effects of multimodal, bi- and unilateral training on selected aspects of motor learning, functional laterality and performance in athletes. More specifically, effects of training within the domains of timing (IM), co-ordination, laterality, concentration and attention are in focus for investigations. Marius PhD studies, on the side of the work on his thesis, have so far focused on Sport performance measuring (kinematics, timing, and laterality), Cognitive measures (attention styles, emotional intelligence, trait/state anxiety and motivation), Brain imaging (fMRI), and the Perception – Action coupling. Marius is a certified IM provider since 2007, has a Bachelor Degree of Social Sciences including certificates in sports medicine, sport psychology and sports pedagogy, and lectures in courses on Sports Psychology and Social Cognition at the university undergraduate level. Alongside his PhD studies Marius works as a mental coach, using a range of brain training strategies, focusing primarily on Cognitive Behavior Therapy and the IM. As a Mental Coach Marius has been working with national level athletes in ice-hockey, soccer, tennis, badminton and WRC Rally, as well as ice-hockey- and soccer officials and Parkinsons patients.

Marius has vast personal experience participating in a wide range of team and individual sports. He has been a state representative in both Soccer and Alpine Skiing, and has been a professional snowboarder for 10 years, being Top 5 on the snowboard world ranking 1999/2000. On his leisure time Marius is riding motocross, surfing, skateboarding or playing golf and ice-hockey.

**Disclosures:**

**Instructor Financial Disclosure(s):** Marius has received honoraria from Interactive Metronome, Inc for presenting his research to IM providers in webinar format. He does not receive royalties or any other form of compensation for the continued publication and use of educational materials he has authored, nor does he sell or receive compensation for the sale of Interactive Metronome products.

**Instructor Nonfinancial Disclosure(s):** Interactive Metronome, Inc provided IM hardware and software for the independent research studies conducted by Marius Sommer and his colleagues at Umeå University - Sweden.

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**Agenda (60 minutes):**

- Speaker introduction & disclosure
- Recap of 1<sup>st</sup> Published Paper: Effects of synchronized metronome training on golf shot accuracy
- 2<sup>nd</sup> Paper In Press: Timing training induced changes in the kinematic properties of golf swing performance
- Experimental Design
- Methods
- Tempo & Rhythm
- Results
- Summary & Conclusions
- Implications

**Instructional Methods:**

LECTURE, PPT, PHOTOS, PUBLISHED RESEARCH PAPER

**CEUs:**

This course is not offered for CEUs.