

# Effects of IM-training on soccer-skill performance in a sample of female elite soccer players.



## Course Description:

This webinar is based on a large study on elite female soccer players, investigating the effects of timing-training (IM) on soccer-specific skills. It will have emphasis on the effects of IM training on the performance of a number of soccer-specific skills (cross-pass, shot for goal and heading), but will also address some of the customized IM-exercises used, and the reasoning behind the choice of these specific exercises.

Moreover, the webinar will include some preliminary analyses of brain activation patterns (fMRI) before and after IM training. Here, we have investigated if the internal / cognitive representations of an observed action may change as an effect of IM training. *This course is not offered for contact hours/CEUs.*

## Target Audience:

- Occupational Therapist
- Occupational Therapy Assistant
- Physical Therapist
- Physical Therapy Assistant
- Athletic Trainer
- Licensed Medical, Rehabilitation or Mental Health Professional

## Learning Outcomes:

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

- Discuss a scientific approach to IM training;
- Demonstrate that non task-specific training can transfer to task-specific performance;
- Effectively measure motor performance outcomes in general, and in soccer in particular.

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

## Instructors:

**Marius Sommer** is a last 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, in addition to the focus of 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 Master Degree of Social Sciences including certificates in sports medicine, sport psychology and sports pedagogy, and lecture 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 Parkinson 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.

Education Department Contact Info:[imcourses@interactivemetronome.com](mailto:imcourses@interactivemetronome.com), 877-994-6776 opt 3 (US Only), 954-385-4660 opt 3, Fax: 954-385-4674

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**Agenda (60 minutes):**

- Speaker introduction & disclosure
- Baseline performance
- Timing in Soccer
- Assessing Soccer-skill performance
- Training regimens
- fMRI / Neural Plasticity
- The human Mirror-Neuron System (hMNS)

**Instructional Methods:**

LECTURE, PPT, VIDEOS

**Contact Hours/CEUs:**

This course is not offered for contact hours/CEUs.