

# Figure Follow: a Step by Step Liberating Device

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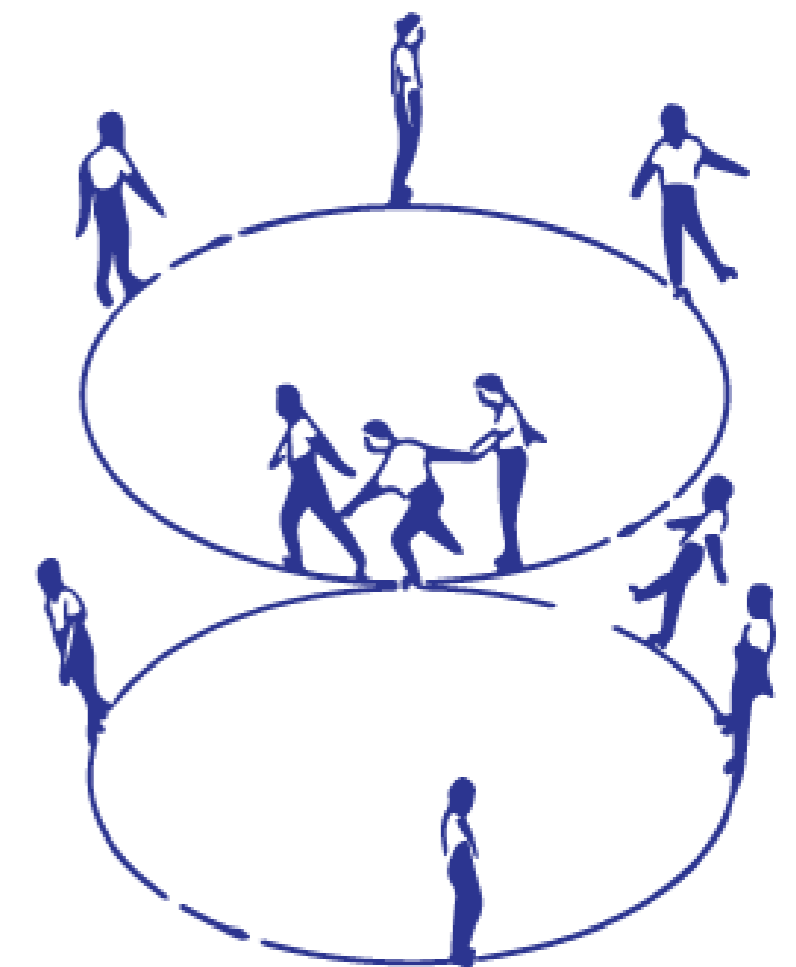
## The Idea

In Compulsory Figures (Discipline of Artistic Roller Skating), the athlete has to skate over a circular line drawn in the rink, with only one foot on the floor. There are 53 different figures which requires a lot of skills.

The really high standards of Compulsory Figures demand for an absolute dedication during all the athlete's lifetime. By being an amateur sport, the athletes have to coordinate their training practices with their jobs, which means rigorous schedules and a limited time for practice and improvement.

This discipline includes also a diversity of age groups, so the standards get higher as the athlete grows up. Making it complicated to follow them in case of any kind of practice break (injuries, for example).

The Figure Follow platform is being designed to provide helpful information to the athletes every time they practice, by themselves or with their coaches, giving them the necessary feedback, spots to focus on training, and simulations of an actual competition, therefore supporting better training efficiency and use of time.



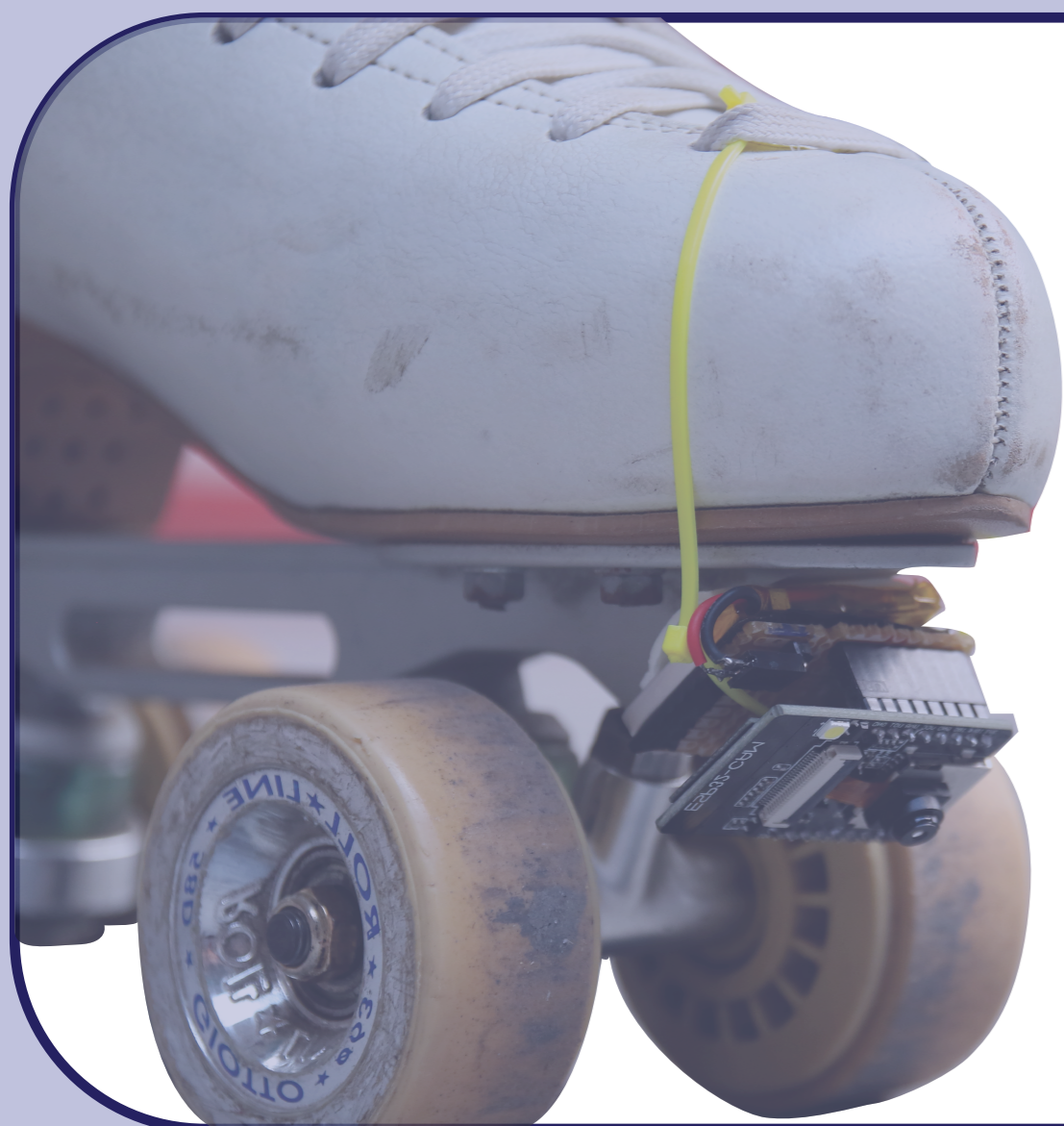
## The Technology

The performance of an athlete in the discipline of Compulsory Figures is judged based upon how well the tracing is held, the quality of the edge running, takeoffs and the correct placement of the turns.

The proposed e-training platform for Compulsory Figures skating is based on only two components: a wireless sensor module, and the e-training software.

**The wireless sensor module**, which is integrated unobtrusively into the roller skates, is responsible for capturing the data necessary to assess the motion of the athlete in the rink and transmit it to the training application backbone.

**The e-training software** that runs as a mobile app on a smartphone or tablet makes available to the athletes and their trainers the data collected during the trainings.



## The Impact

The use of new technologies has proven to have great results enhancing performance and motivation among sport athletes, and we are exploring the same potential in Compulsory Figures of Artistic Roller Skating. Until now, training depended on the eyes and experience of the trainers, the senses and intuition of athletes, and a few small artifacts and tricks used during practice.

The wireless sensor module that is being developed has this enormous value of supplying data and supporting the learning process in real-time, transferring aggregated information to an e-training software installed on a mobile device. It is a tool to be used by coaches, as they obtain immediate useful information to design and model individual performances, but also by the athletes that, after classes, individually or in small collaborative groups, can find flaws and new ways to deal freely with their technical problems.

Our project is to increase the techno-scientific capabilities of athletes in Artistic Roller Skating, feeding them with information about what their bodies can do, and what they need to learn to become better.

