

1ST ISEA WINTER CAMP IN SPORTS ENGINEERING

February 28th – March 4th, 2016 San Martino di Castrozza (Italy)

http://www.dii.unipd.it/corsi/summer-and-winter-schools/winter-school-sports-engineering

ISEA Winter School in Sports Engineering

The Camp will focus on safety and performance issues in Winter Sports, providing students with the opportunity to enhance their knowledge and expertise on ski and snowboard, especially in relation to the effect of different equipments or techniques, with the opportunity of conducting a pilot research project. Under the leadership of Professors active in the field of Sports Engineering, several technical sessions will be carried out with in order to answer to a set of research questions corresponding to the different projects. During the *field test sessions* on the slopes, equipments and data collection systems will be used in the unique environment of Pale di San Martino.

ORGANIZING COMMITTEE: Dr. Nicola Petrone (Host) Department of Industrial Engineering University of Padova (Italy) Tel.: +39 049 8276761 Fax: +39 049 8276785 E-mail: nicola.petrone@unipd.it

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Dr. Riccardo De Filippi

COURSE LOCATION: Hotel Fratazza, San Martino di Castrozza

PRELIMINARY PROGRAMME:

Topics: Instrumentations for Field Data Collection, Field Motion Capture Techniques, Biomechanical Modeling, Paralympic skiing. Techniques: Experimental Methods (Ski-Snowboard Load Cells, Pressure Insoles, IMU sensors, GNSS). Field Data Analysis: Upload of Field Data and Preliminary Analysis: teachers will assist in the re-analysis of the data collected on the field. TEST SESSIONS: Time spent on the slopes, divided into groups. Field data collection and equipment comparative evaluation. (Ski-snowboard load cells, Pressure Insoles, IMU sensors...) (Ski - Boot - Snowboards comparative evaluation...)

The students will be asked to cover the cost of 5 nights' accommodation from February 28rd to March 4th at Hotel Fratazza. At the moment, a total number of 15 students will be admitted to the Camp.

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