

# 第250回スポーツサイエンス研究会

日時 2025年4月8日(火) 15:00~16:30

場所 早稲田大学所沢キャンパス 100号館 第一会議室及びZoom

**演題** Rapid Weight Loss in Combat Sports:  
The Role of Heart Rate Variability

**演者** Luis-Millán González 先生 (University of Valencia)

## 抄録

### Resume:

RWL is a common practice in combat sports like judo to meet weight categories through caloric restriction, dehydration, and intense exercise. While effective short-term, it causes significant stress, leading to autonomic imbalance, reduced heart rate variability (HRV), cardiovascular strain, metabolic changes, and psychological effects like anxiety. HRV, which measures the balance between sympathetic and parasympathetic activity, is a promising tool to monitor stress and health in athletes. This seminar reviews the literature on RWL and HRV, discussing study design, ethical considerations, medical supervision, and measurement protocols. It also explores the feasibility of future experimental research on judokas

### Biography:

I am a Full Professor at the Faculty of Sports Science, University of Valencia, where I teach Judo in the Bachelor's program in Sports Science and Advanced Statistics in the Research Master's program. As a former member of the Spanish National Judo Team, I have integrated my athletic experience into my academic career. My research focuses on applying advanced analytical methods to sports science. Using programming languages like MATLAB and LabVIEW, I have conducted studies on biological and biomechanical signals, employing techniques such as the Fast Fourier Transform and Wavelet Transform to analyze swimming, human balance, and judo performance. I also specialize in neural networks, a cutting-edge statistical tool for the social sciences. My multidisciplinary approach has fostered impactful research and successful collaborations. My work emphasizes making complex data analysis accessible, and bridging advanced analytics with practical applications to drive innovation in sports science and education.

### Zoom情報

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